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URIC ACID TOXEMIA

Its History, Literature and Treatment

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A Practical Treatise
ON
URIC ACID TOXEMIA

In All Its Phases, Including Its Treatment With

THIALION
(A Laxative Salt of Lithia.)

With a Complete Bibliography
and Index.

FIFTEENTH EDITION.

1906.
THE VASS CHEMICAL COMPANY, Inc.
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INTRODUCTION.

As may be observed, the present edition of this brochure differs from those preceding it in several particulars, to the following of which we may direct attention as being the most important changes; to wit:

Owing to the constantly increasing amount of clinical material received from time to time, the booklet has been growing in bulk until it has reached a point in size, to exceed which would render it too cumbersome for practical use. It has been deemed advisable, therefore, to shorten the articles, wherever possible, by presenting them in the form of abstracts: rejecting the immaterial, but retaining the material part in each instance. Some of the more important articles are still left in their entirety, in the form of reprints. In both of these forms, however, due credit is given to the journal in which the article originally appeared, together with the date of publication and the name and address of the author. A few of the older articles have been stricken out entirely and several new ones added.

The descriptive portion of the pamphlet has been re-edited in part, to keep pace with the accumulating evidence concerning the therapeutic action of thialion, as shown by an additional two-years' experience in its employment. The tabulated "references" to reprints of articles, heretofore appended to their respective sections, have been omitted here; but may be found alphabetically arranged in the index.

In lieu of the "table of contents," which appeared on the inside covers of previous editions, an index of authors' names has been prepared for the present edition, as well as a new and complete index of subjects and titles, which will enable the physician to find any given topic with greater facility.

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THIALION

A Laxative Salt of Lithia.

PHYSICAL PROPERTIES.—Thialion is a granular salt, of a lightish brown or straw color, sometimes varying in shade to a somewhat darker hue. It is non-hygroscopic, non-deliquescent, markedly diffusible and invariably of a definite and uniform strength. It does not spoil in any climate; i. e., it never deteriorates.

It does not effervesce.

It is agreeable to the stomach, and it is not unpleasant to the taste, though very slightly flat.

It is only partially soluble in cold water, but freely so in hot water, imparting to the solution a faint yellowish-brown tinge. It should always be dissolved in hot water, and drunk at the highest temperature that can be borne comfortably. Taken in this way, it is quickly and completely absorbed into the circulation—an effect which is of inestimable therapeutic advantage, and one which we believe cannot be obtained from lithia administered in any other form.

Thialion has never been patented; and only the *name* is made proprietary. The details of its manufacture (i. e., the exact process) have never been made public for obvious reasons. And yet, in this respect, the physician probably knows as much, or as little, as he does concerning the manufacture of many other salts in common use—e. g., as he does of sulphate of quinine or of morphine.

CHEMICAL NATURE.—Thialion may be described from the chemist's standpoint as a complex salt, formed by the union of sulphuric and citric radicals with sodium and lithium bases. In the process of manufacture, decomposition of the chemical agents employed and rearrangement of the various molecules take place, forming new combinations.

In the preparation of any alkaline salt on a large scale, it is the custom to part the various products; but, in making thialion, the lithium base is not removed from among the secondary combinations but is left in combination with one of the residual products, and a new laxative salt containing lithium and sodium is produced. It follows from the method of manufacture that thialion is not a preparation composed of distinct ingredients in the sense of a prescription formula, as is Dover's powder for instance; that is to say, it is not the pharmaceutical mixture of so much of a prescribed sodium salt with so much of a given lithium salt, but the sodium and lithium bases are in such relation that vital action is required to part them. Hence, in thialion, we find a remedy the effects of which are *sui generis*, or at least far removed from those obtained by prescribing any *mixture* of sodium and lithium salts.

In hot aqueous solution this salt forms an artificial *alkaline mineral water* of marked potency and unusual solvent properties. In this form, though not chemically incompatible with other remedies which would naturally be thought of as adjuvants, yet it should usually be prescribed ALONE, an hour or more before other drugs. This is especially true of iron, though bismuth or cerium oxalate may be taken immediately in those cases where the ingestion of hot liquids is ill-borned.

By dissolving a mixture of the sulphate and citrates of sodium and lithium in a glassful of hot water, and swallowing the nauseous mess, the wide difference between a mechanical mixture of these salts and their combination in the form of thialion, will at once be fully appreciated.

CHEMICAL ACTION.—Though, naturally, much of the interest taken in thialion relates to its chemical composition—i. e., a very proper curiosity being felt concerning the nature of the dry salt, itself—yet, all this fades to nothing in comparison to the interest we cannot but have, as to what takes place within the body.

We may consider, if we see fit, that the sulphuric radical is made the mate to both sodium and lithium, so far as both are present in the needed proportion; for, while the larger part of the sulphate of soda is excreted, or, better, emptied from the bowel as such, some must have been absorbed, since a portion is discharged as sodium hydrogen sulphide or as sodium sulphide. This can only be explained by assuming a previous absorption. Further, we know, that, as the lithium is at least in large measure discharged by the kidneys, it must have passed into the blood-stream; which passage it is not likely to make as lithium citrate, but which it can easily make as a sodium-lithium sulphate. It is very properly doubted if the sodium salt formed by the sulphuric acid is a neutral salt at the beginning, since more probably an acid salt is the first member (not Na_2SO_4 but HNaSO_4), and in this case the sodium-lithium sulphate can be assumed, in which form the lithium would be absorbed with comparative ease. The citric acid may then be supposed to unite with the sodium to form sodium citrate which is very readily absorbed.

The diuretic action upon the kidneys will then be two-fold, the lithium (a base) uniting with the uric acid, while the citric radical, broken to carbonic acid, will unite with any base demanding elimination and will remove it. Under circumstances such as these, the observed usefulness of thialion is simply a necessity.

NAME.—As the descriptive naming of this double salt was found to require a technical term much too cumbersome for practical use, the name "thialion" was coined as being suitable. The latter, as may be seen, is derived from the word "lithia," the letters of which have been transposed and the syllable, "on," added for the sake of euphony. The word is pronounced, "THI-AL-ION," with accent on the second syllable—the "a" being sounded as in "man."

PRESERVATIVE QUALITIES.—It is not essential that the salt should be kept in a colored or blue glass bottle, although the chemical action of actinic rays of light would probably be less operative in such a case. Thialion may be kept in transparent glass bottles or in an ordinary wooden box, without any apparent loss of strength even though exposed to air and light for several months. Samples of this kind have been preserved at the factory for nearly eight years, with no deleterious effects as proven by frequent tests. The only change noted is a faint alteration in the color of the salt, which becomes slightly darker after prolonged exposure to sunlight. Its physiological action, however, remains unchanged. Being an anhydrous granular salt (without "water of crystallization"), the physical change produced upon thialion, by exposure, is practically nil, even when exposed to dampness. We believe, however, that in order to eliminate every possible element of risk, the salt may be preserved to the best advantage in its original package.

WHY HOT WATER.—Practical experience has conclusively demonstrated that the best method of administering thialion is as follows; to wit:

1. Dissolve thoroughly a teaspoonful of the salt in half a glassful of hot water.

2. Add sufficient cold water to reduce the temperature of the liquid to the just drinkable point—then drink the whole at once.

It is probable that the therapeutic value of the older diuretics was due as much to the caloric effect of the hot infusions used as to the physiological action of the simple remedies themselves. The osmotic and solvent effect of heat is best exhibited in the warm bath, where the imbibition or absorption of water takes place.

Much more is implied in this last statement than may at first sight appear. To begin with, it should be remembered, that, as the temperature of any liquid containing crystalloids is raised, not only is the rate of diffusion of the latter increased, but their passage by osmosis into an adjoining colloidal solution is accelerated. In other words, salts in watery solution will pass through animal membrane into the colloidal blood more rapidly and more completely if the temperature of the solution is equal to, or greater than that of the blood. It is for this reason that hot alkaline baths (104° F.) are given in gout and rheumatism. The success of the method of treatment observed at the Hot Springs is dependent upon the same dynamic law; i. e., the lithia, soda, etc., contained in these waters, are more readily absorbed into the system. If the body were simply to be immersed in cold water, very little of these salts would be taken up through the skin. The same lack of results necessarily obtains when cold lithia water is taken into the stomach. It will be seen, therefore, that in ordering the patient to dissolve thialion in hot water, and to drink it before becoming lukewarm or cold, an important principle of molecular physics is involved upon which is insured the thorough absorption of this remedy into the circulation.

PHYSIOLOGIC ACTION.

CIRCULATION.—Like certain other alkaline medicinal agents (as K. I.), thialion reduces the viscosity and increases the alkalescence of the blood. This effect is produced both in health and in disease. Its most marked action upon the circulation, however, is observed when the blood is less alkaline than normal, due to an excessive quantity of waste tissue salts of the uric acid type. In such conditions, by giving thialion, the capillaries are freed from the urates which have previously impeded their flow, and the circulation of every organ and tissue of the body is correspondingly increased in volume and in purity; the result of which is not only to promote oxidation, but to indirectly stimulate the functional activity of the glandular organs. In this, it resembles somewhat the salts of potassium, but unlike them it never causes cardiac depression and hence is always perfectly safe from the therapeutic standpoint.

An explanation of the radical difference to be observed in the action of thialion as compared with that of the various lithia preparations on the market (e. g., tablets, salts, granular effervescent salts, mineral waters, etc.), may be given briefly as follows; to wit:

In the first place, it should be understood that lithia, as ordinarily prescribed in the form of the citrate or carbonate, is only partially absorbable as such, and in so small quantities as to be of little or no effectual service as a solvent of the urates. On the contrary, it is probable that the small amount of lithia thus absorbed into the circulation, is, as Haig believes, "at once waylaid by the phosphate of soda present, forming with it a nearly insoluble triple phosphate; thus, not only is little or no lithia left to combine with uric acid, but the latter is in a measure deprived of its natural solvent (the neutral phosphates), and is consequently thrown down as a deposit."

When thialion is administered, on the other hand, its alkaline constituent (soda) unites more readily than lithia with the soda salts of the circulation,

increasing them in amount (i. e., increasing the blood's alkalescence), while the lithia is left free to combine with the uric acid as in the test-tube. The well-known alkaline salts of soda and potash produce similar results, but to a much lesser degree. It will be seen, therefore, that while the citrate or carbonate of lithia, taken singly, partially cleanses the blood of uric acid by precipitating it into the bodily tissues, thialion removes it in solution by way of the kidneys, and, furthermore, by increasing the soda salts, produces the additional therapeutic effect of a cholagogue agent in stimulating the flow of bile and initiating peristaltic action of the bowels. Though the phosphate of soda resembles thialion in its cholagogue effects—preventing inspissation of the bile and crystallization of cholesterin—yet it lacks the well-known solvent action of the lithia salt upon uric acid, and besides, tends to prevent the free elimination of urea,—as may be observed by any of the ordinary urea tests.

It has for some time been advocated by our best authorities that the natural mineral waters were too weak in their alkaline ingredients to ever become very effectual as uric solvents. It was over fifteen years ago, that the late Prof. Abraham Jacobi, of New York, in an article entitled "Therapeutics of Infancy and Childhood" (Published in *Archives of Pediatrics*, Jan., 1890), made the following significant statement:

"In cases of renal calculi (most of which consist of uric acid), particularly those cases which occur in gouty families, the diet should be limited to but a moderate quantity of strongly nitrogenous food. The patient must be encouraged to drink much water, alkaline waters to be preferred. The natural lithia waters (though the best) contain less than the occasion calls for, thus those which are artificially prepared have the advantage over those prepared by nature."

It will at once be seen that when thialion is properly taken according to the directions—i. e., dissolved in a glassful of hot water—an artificial alkaline lithia water will be administered which fulfils the indications not met by natural waters, as described by Jacobi, and it is, doubtless, partly for this reason that the results of treatment in these cases have proven so much more satisfactory to those physicians who have tried both methods.

NERVOUS SYSTEM.—Thialion increases the assimilation and metamorphosis of proteid and purin materials, favoring the elimination of uric acid and urea, and hence by freeing the system from the acid promotes a more energetic cellular action and influences indirectly the nervous system, improving the general muscular tone and stimulating the nerves, thus producing buoyancy and cheerfulness, where, hitherto, had existed depression, listlessness and general debility. The theory is now well established that headache, depression, fits of "blues," and various other functional disturbances are often due to the presence of an excess or uric acid in its colloid form obstructing the cerebral capillaries.

To show the difference between the action of thialion in these cases and that temporarily produced by administering some chemical agent which *decreases* the alkalinity of the blood forming insoluble urates and driving them into the connective tissues and joints, *causing rheumatism*,—the following clinical test which was recently given by us, will prove most interesting and instructive:

Mrs. G., æt. 50, suffered from frequent attacks of the "blues" and "sick headaches," and complained of lassitude, mental confusion, loss of memory lack of ambition, irritability, cold extremities, etc., As her urine was characteristic of the lithæmic condition, we attributed the foregoing symptoms to an excess of uric acid and its congeners in the circulation. As an experiment, thirty drops of acid phosphate were administered in a half glassful of cold water, t. i. d., for a fortnight. Before the end of the first week, however, the patient reported "*decided improvement*." The headaches disappeared, and mental brilliancy

and a feeling of exhilaration followed. The urinary water increased greatly in quantity, was paler in color, but contained much less of the urates than formerly. It was evident that the capillary circulation was freer—that it was unimpeded by the presence of uric acid in excess; but that this excess had not exhibited itself in the urine. Where was it?

Early in the second week this question was answered. The patient now began to complain of pains in the muscles of the side, neck and back, and exhibited some tenderness in one carpal and two metatarsal joints. Before the end of our fortnight's experiment, she was confined to her bed with a severe attack of lumbago and torticollis, and threatened with articular rheumatism in at least three joints. The acid remedy was now withheld, a colored placebo administered—and nothing else. Within forty-eight hours the rheumatic attack had subsided, the urine again became scanty, high-colored, containing some urates, and the headache with its disagreeable accompaniments returned with increased virulence. This condition of affairs was permitted to exist for a week, the patient fully recognizing that she was back again in the old rut. It was then that we prescribed an alkaline uric solvent (thialion); a teaspoonful being given in a glassful of hot water every second hour the first day, until four doses had been taken. The second and third days, a teaspoonful was given an hour before each meal, after which one dose was given daily, immediately upon arising. The result was as expected. The headaches vanished in a day or two, the same mental exhilaration was experienced as in the previous instance, but, in addition, the urine became loaded with urates. The treatment was continued in this way, for a fortnight, the urine being kept slightly on the alkaline side of the neutral point; and to-day the patient is enjoying comparatively good health.

Now what is the explanation from the uric acid standpoint? We contend that the patient was suffering originally from migraine, due to uric acid excess in the circulation. The "acid phosphate" which we administered, reduced the alkalescence of the blood formed insoluble urates, or at least, caused their deposition in certain muscles and joints, thus initiating an attack of rheumatism, but freeing the capillaries and effecting relief from the headaches, etc. By withholding this acid remedy, the blood speedily regained its normal alkalinity the urates were reabsorbed into the circulation, relieving the rheumatism, but reproducing the headaches. Lastly, the alkaline solvent thialion, when finally administered, not only freed the capillaries from their obstruction, and thus relieved the headaches, but avoided the rheumatic symptoms and effected a permanent cure by eliminating the toxin from the system entirely—as was demonstrated by its appearance for a few days in greatly increased amount in the urine. *Uric Acid Monthly*, Vol. 1, No. 4, April, 1901.

LIVER AND BOWELS.—One of the most valuable features, concerning the physiologic action of thialion, is that of its power in aiding or stimulating the hepatic function. It is in no sense a cathartic. It is a laxative. It does not whip the bowels into action, it simply aids them in the natural performance of the process by enhancing the biliary flow, increasing peristalsis, and rendering the passages more soluble. It cleans out the clogged up liver cells, and at first gives rise to alvine dejections of an exceedingly malodorous character. The stools are usually well formed, but of a soft "mushy" consistency. Four or five doses, repeated every hour or two, will produce a mild catharsis, but with none of the debilitating after effects so common to the class of remedies called "salts;" neither does it produce tenesmus nor favor a chronic torpidity of the bowels.

Owing to its solvent action upon the urates and the consequent removal of amido-acids from the circulation (together with the additional salt of sodium furnished), thialion serves to increase the fluidity of the bile and to neutralize the biliary acids (taurocholate and glycocholate of sodium), thus proving of

great value in the treatment of gall-stones. That is, by preventing the bile from becoming viscid, and by its solvent effect upon cholesterin and lime salts, it effectually stops the formation of biliary calculi. As the flow of the bile into the intestine is also materially increased, the hepatic congestion so common in cases of constipation is at once relieved. It is upon the so-called "torpid," or "lazy liver," however, that the beneficial effects of thialion, as a uric solvent and eliminant, have been more particularly noticed—especially in corpulent people and those leading a sedentary or inactive life.

GENITO-URINARY TRACT.—Thialion has a wide application and field of usefulness for the relief of congested and irritable conditions of the genito-urinary tract and pre-senility of the sexual organs. The kidney is especially sensitive to its action. It is a powerful diuretic and solvent of uric acid, having no equal in this respect. In his excellent treatise, entitled, "Therapeutics: Its Principles and Practice," Prof. H. C. Wood gives the following indications for the use of diuretics:

1. To maintain the action of the kidneys.
2. To evacuate fluid.
3. To soothe and diminish irritation of the genito-urinary organs; and:
4. To alter the urinary secretion so as to prevent the deposition of calculous material.

Thialion meets all these indications. It maintains the action of the kidneys by gently stimulating the excretory functions; it evacuates fluid, by virtue of its cholagogue properties; it soothes and diminishes irritation of the inflamed mucous membranes of the genito-urinary tract by rendering the urine neutral and non-irritating; and lastly, and most important of all, it renders soluble, and therefore easily excreted, uric acid and calculous material. It, like lithium, and because of the large quantity of lithia contained in it, unites with uric acid and forms aurate of lithium, the most soluble salt formed with uric acid, a salt much more soluble than is formed with either potassium or sodium. Not only will thialion dissolve uric acid, but it will actually, as proven by experiment, soften and disintegrate uric acid calculi, a result hitherto impossible to produce by any therapeutic means at our command. It also raises the daily amount of urea excreted, diminishes the specific gravity of the urine, and dissolves crystals of urate salts.

The solvent and eliminant action of thialion (so far as the urates and other urinary solids are concerned) is beautifully illustrated in examining the urine of a gouty, rheumatic or Bright's patient, during the first few hours or days treatment. The quantity of urinary water is increased; it rapidly becomes less acid in reaction (finally neutral, or alkaline); and, at first, contains an abnormal amount of uric acid and urea. In a short time, we witness the gradual lessening of these solids, until (as the patient improves) the percentage returns to the degree found in health. The urine can be made faintly alkaline in two or three days, and steadily maintained at that point, by administering a teaspoonful of the salt once or twice per day—whereas four hundred grains of the bicarbonate of soda, given in divided doses daily, are required to produce similar effects.

MUSCLES AND JOINTS.—Dr. Alexander Haig, of London, who is considered the highest authority on the subject of uric acid toxæmia, states that uric acid acts in the production of diseases, (1) "through the circulation, which it controls throughout the body;" and (2) as "a direct irritant of fibrous tissues and joints." There can be no doubt that the uric acid is deposited in the muscles and joints in greater quantity than in any other portion of the body, and it is owing to its power to remove the foreign body in this abnormal condition, that thialion has become so important an addition to our *Materia Medica*. Its therapeutic

action, however, in these cases is somewhat unique, the joints becoming more tender after its administration, and the patients for a few days feeling more pain. This is due to the fact that the remedy, by virtue of its solvent and diuretic action, sweeps the poison out of the system through the bowels and kidneys, the blood reaching out for the surplusage stored in the serous cavity of the joints, and thus by its removal causing the aforesaid temporary disturbance.

THERAPEUSIS—URIC ACID TOXÆMIA.

By the general term "URIC ACID TOXÆMIA," as used by us on our cover page, we mean to include all disorders in which there is present an abnormal amount of waste tissue debris or salts of the uric acid type in the system, whether suspended in the blood and extra vascular fluids, or deposited in the various tissue-structures of the body. The condition may be due (1) to over-ingestion of purin foods and drinks, or (2) to insufficiency of the liver and other tissues in completely metabolizing into urea their proper percentage of the purins of the food and bodily cells; but (3) it is principally due to *retention*, owing to the failure of liver, kidneys and bowels to perform the function of elimination properly.

Owing to the fact that it has been found that uric acid is not derived from albuminous foods *per se* (but from their purin-contents), nor from albumin-metabolism as was once thought, many modern authors have mistakenly assumed that no portion of the uric acid ever becomes normally oxidized into urea. It has been conclusively shown, however, by the convincing experiments of Loewi, Ascoli, Chittenden, Neumeister, Croftan, I. Walker Hall, and others, that the ingested purin (and doubtless that also arising in the organism from cellular catabolism) is first oxidized in the body to trioxy-purin (uric acid), and that a portion of this (45 per cent.) is later decomposed by the liver perhaps to a slight extent also by the general tissue and finally excreted as urea. This hepatic function is attributed to the presence of a ferment, or "oxidase." If for any reason, therefore, the liver should fail to perform its function properly an excess of uric acid in the system results.

Ascoli discovered the uric acid destroying power of the liver as follows. He mixed blood with uric acid or with lithium urate and first determined that blood alone did not possess the power of destroying uric acid if kept at body temperature for several days. He then passed a mixture of blood and uric acid through a fresh dog's liver that was kept at body temperature and discovered that a considerable loss of uric acid occurred. At the same time he discovered a great increase of a urea-like substance, "which, in all probability," says Croftan, "was allantoin." (Cf. *Pfluger's Archiv.*, Vol. 72, 1898, p. 340.) Finally as further confirmation of the uric acid destroying power of the liver, Hahn and Nencki (Cf. *Archiv. für exper. Pathol. u Pharm.*, Vol. XXXII, p. 161), determined that a great increase in the excretion of uric acid occurs if the blood-stream is diverted from the liver and forced to flow directly into the systemic blood vessels through an "Eck fistula." They found that under these circumstances nine times more uric acid was excreted than if the blood were allowed to pass through the liver. Even if no purin were given with the food, they found a great increase in the uric acid excretion (before the operation 0.021 gm., after the operation 0.181 gm. of uric acid) showing that the liver is also concerned in the destruction of *endogenous* purins.

The conclusion to which we are inevitably forced is, that metabolic disorders are frequently caused by the ingestion of purin-containing substances which can serve no useful purpose as food, but which exact extra service on the part of the liver and kidneys to insure their excretion. In the treatment, there-

fore, it is evident that the extraneous source of supply should be cut down as much as possible, and attention given to aiding the hepatic and renal functions.

As a practical demonstration of the therapeutic value of thialion in this respect—its solvent power over the urates; its stimulating action upon liver, kidneys and bowels, thus securing the elimination of these waste salts *in solutio* by way of the urine, producing results which had hitherto been unobtainable, in the treatment of the innumerable disorders due to uric acid toxæmia—we would direct attention to the one hundred thirty clinical articles or more published in this brochure, which have been reprinted from the various current medical journals of this country and Canada.

THE ONE HUNDRED THIRTY CLINICAL ARTICLES.—Many of these articles are from the pens of the most eminent members of the profession in this country, whose high official connection with the American Medical Association and with various well-known medical institutions of learning, has rendered their names familiar to the majority of general practitioners, young and old, in every section of the country. The professional standing of these men is a sufficient guarantee that an unbiased opinion has been expressed, and that the articles from their pens are well worth reading.

It is perhaps unnecessary for us to state in this connection that none of these gentlemen recommended the use of thialion until after the most thorough clinical tests of its efficiency had been made and made personally. In some instances the endorsement was made during the delivery of a clinical lecture to a class of under-graduates, at the college of which the lecturer was a member of the faculty at the time. These lectures were subsequently published in one or more of the prominent medical journals of that date, from whence they have been reprinted in *URIC ACID TOXÆMIA*. The name and date of the journal, in which the articles originally appeared, have been given in each instance, together with the author's name and address. Of these, ten will be recognized as well-known college professors, two of whom are Ex-Presidents of the American Medical Association. Three are Ex-Presidents of the Amer. Med. Editors' Asso.; two, Ex-Presidents Miss. Valley Med. Asso.; one, President Ky. State Board of Health; and one eminent gout specialist. The writers of the other articles are physicians of high standing in town, county or state societies, and all are well and favorably known in the communities in which they reside.

I. LITHÆMIA (URICACIDÆMIA.)

The majority of modern investigators (with whom we are in perfect accord) accept the teachings of the originator of the term, that "*lith-æmia*," or uric-acid-æmia, simply means (as the etymology of each word signifies) *uric acid blood*—no matter how caused—and that various symptoms arise as a consequence of its presence there (in excess). It will be observed that the term is more restricted in its application, than is that of "*uric acid toxæmia*,"—the latter meaning that there may not only be an accumulation of uric acid in the blood, but anywhere else in the system; e. g., in the tissue juices and solids. Uric acid accumulation in the blood (or lithæmia), may therefore, like uric acid toxæmia, as already stated, be due to one, or two, or all of three causes; viz: (1) introduction; (2) suboxidation; (3) retention.

The symptoms of lithæmia are protean in character, great in number, and of a kind to be expected from the presence in the capillaries of colloid urates which impede their flow. Sluggish circulation to and from certain organs and tissues of the body, resulting in congestion of those parts, is the chief characteristic of this disorder. The part to be affected will vary in different individuals, depending upon their vocation—i. e., which part of the organism in a given case is

called upon for special effort. The man who uses his brain, or whose cerebral capillaries are required to do extra work, will have headache, depression of spirits, "fits of blues," sleeplessness, loss of memory, etc. The man of brawn, or he whose muscles are constantly engaged, will complain of sluggishness, muscular inertia, inaptitude for physical exertion, dull aches, etc.

In nearly all cases, of course, the *liver* becomes affected, since this organ is actively engaged in every individual. Constipation, sallow skin, biliousness, and all the usual accompaniments of hepatic congestion, or "torpidity" of the liver, will be complained of. In short, manifestations of lithæmia, not sufficiently pronounced to be dignified by the name of gout or rheumatism, but which are characterized by symptoms denoting loss of nerve tone and consequent irritability and sleeplessness, high arterial tension and capillary congestion, plethora of digestive organs, headache, backache, etc., and generally recognized as being due to deficient elimination of waste products of the uric acid type from the system,—represent a type of cases which are becoming more numerous every day especially in our larger cities.

In the treatment of this class of cases the aim of course is to modify as far as possible the lithæmic soil, (i. e., an inherent tendency to irritation, inflammation, proliferation of connective tissue, etc.), by assisting elimination of urates in every possible way, remembering that the function of organs engaged in this duty is frequently imperfect. Thialion will prove beneficial in all such conditions because of its power to eliminate the waste products of tissue metamorphism, the retention of which in the system must become injurious. It is as has been observed, not only a remedy for the removal of toxins and other effete material from the intestinal canal, but is a most valuable anti-lithic agent and kidney alterative, and, as is well understood, the kidneys are the most important organs for draining the system of the *debris* which is left in its wake.

2. IRREGULAR GOUT.

By the term "irregular" (visceral, or abarticular) gout, is meant that phase of uric acid toxæmia in which the urates have been precipitated out of the circulation and deposited in the various tissue-structures of the body. It is the stage which invariably follows lithæmia, unless the urates are removed from the blood (*via* the urine) before the deposits occur. It will readily be understood that if waste salts of the uric acid type are allowed to remain long in the circulation, the blood sooner or later becomes less alkaline than normal owing to the presence of these salts, and the latter are then thrown out of solution to become deposited in the contiguous tissues. Being still in the colloid form, they may, of course, be reabsorbed and conveyed by the circulation to another locality, there to be again deposited; thus causing, by their irritating presence, derangements to appear first in one portion of the body and then another.

Normally, the blood is just sufficiently alkaline to hold its waste salts in solution or suspension, until their removal is assured by means of liver, kidneys and bowels; but if the alkalinity of the blood be reduced from any cause (as exposure to cold, over-exertion, etc.) the urates are thrown down as a deposit, just as in the test-tube under similar circumstances.

The character of the symptoms produced, will depend upon what particular tissue or organ chances to receive the deposits. If the latter occur in the fibres of muscles, we have "muscular rheumatism," or pains and aches; if in the sheaths of nerves, we have neuralgic troubles; if in the fibrous structures of the intestines, we have colicky pains; if in the arterial coats, we have atheroma; if in the cadiac valves, we have endocarditis, or "heart-failure;" if in the stroma of glands, we have cirrhosis; if in the bronchial membrane, we have asthma; etc. In other words, the symptoms of irregular gout are legion.

Though in the nomenclature of our text-book, these various derangements are classed under separate headings, and as many different treatments are recommended as there are names, yet it will be seen that they are often but the effects of a single cause, and that the same treatment is indicated in every instance. In short, by removing the disturbing factor, we may obtain the same satisfactory results as in the disorder we have previously described—lithæmia, the first stage of uric acid toxæmia. The remarkable solvent and eliminant power of thialion has proved of inestimable advantage for this purpose, as may be seen in the speedy dissolution of the deposits which previously existed, and their removal (*in solutio*) from the body by way of the urine after a few days of the treatment.

3. GOUT.

Gout is the third and last stage of uric acid toxæmia. In the two conditions already described, the urates have merely reached the colloid form, remaining (1) in the blood as such, or (2) precipitated out into the tissues. In the gouty stage, however, the symptoms are caused by the presence of deposits in *crystalline* form (in the joints or elsewhere), where they remain to cause irritation and finally set up inflammation.

While in the gouty patient, the circulation of the entire organism becomes tainted with urates to a greater or less extent, it is only in distal parts poorly vascularized (as in terminal joints), where the removal of deposits is delayed and where the environing conditions are favorable to the precipitation and crystallization of uric acid, that the tophi or concretions are formed,—as in the septum of the nose and helix of the ear, far removed from the cardiac centre and exposed to cold (freezing easily); or where pressure or constriction is put upon the return circulation, as in the bursa of the elbow, the finger joints, and toward the end of the great toe, in the joint of which the synovial fluid is practically at a standstill, especially when the shoe is on.

So long as a blood rich in urates is brought to the spot, the tophus steadily grows by attracting other urates to it. Doubtless, there will be alternate precipitations and absorptions keeping pace with the natural fluctuations in the reaction of the synovial fluid, which, according to Frerichs, may vary twenty per cent. in the strength of its alkalinity. Especially will this be observed at night, in the wintry season, after removal of the shoe and the restoral of circulation, with rest of the parts from motion and warming of the toe in bed. On such occasions, either (1) the mechanical irritation of the crystals as withdrawn in part from their site and reabsorbed into the now highly alkaline synovia, or (2) the effect produced by the chemical change from one form to the other —may set up congestion and inflammation of the adjacent tissue-structures, thus giving rise to the so-called “acute gouty attack.”

In all three stages, it is evident that the doctor’s efforts should be directed toward the removal of the offending urates from the system, whether still in the blood or deposited in the tissues, whether in the colloid or in the crystalline form. For this purpose, an agent is needed which increases the solvent power of the blood for the urates, and at the same time aids the organs of elimination in effecting their removal. Such a solvent and eliminant is thialion.

4 RHEUMATISM.

The word, “rheumatism,” was used originally to designate any painful affection of the muscles, nerves or joints, and included even intestinal colics. In fact, all of the morbid conditions which we now recognize either as gout or as rheumatism, were at first classified under the general head of “arthritism,” and this latter term corresponded very closely with our modern conception of it,

viz. "The condition in which there is a tendency to joint disease." ("Nat. Med. Dict.")—and, we may add, vitiation of the connective tissue and its derivatives.

It is now a well-recognized fact that the arthritis, denominated "gout," is characterized by the presence in the organism of an excess of the salts of uric acid, and that manifestations of the disorder are due to the precipitation of the less soluble biurates in the various connective tissues, especially the synovial membranes and cartilages. When these uratic deposits occur in the joints, forming tophi which set up inflammatory reaction and pain, the condition is known as "regular" or "articular" gout; but if the deposits occur in other tissues of the body (e. g., muscular, nervous, glandular, etc.), the symptoms produced are those of "irregular," "ab-articular," or "visceral" gout. In the joints, owing to the lessened vascularity and low alkalinity of the parts, the urates are precipitated out in such amount and retained so long as to become crystallized in the form of the sodium biurate, and, as such, is readily recognized in any autopsical finding. But, in "irregular" gout, this is seldom the case, for the deposits are more minute and become frequently absorbed, although even here the effects may be seen in the hardening and thickening of the affected tissues, as of the coats of arteries and parenchyma of glands—e. g., of kidneys and liver.

The arthritis of articular rheumatism differs from that of articular gout, chiefly because of the larger joints affected, the more soluble form of the uratic deposits, and because other materials (of a septic nature) may be the exciting factor—as in gonorrhœa and other infectious diseases. The so-called "rheumatism" of other tissues, however (muscles, nerves, etc.), may for all practical purposes be classed with "irregular" gout, except when caused by a septic agent as mentioned above, and even then the treatment (i. e., eliminative) is of a similar character. As to the difference in the anatomical conditions prevailing in the rheumatic joint as compared with that of gout, we are probably indebted more to the original researches of Prof. Alexander Haig, of London, than to those of any other modern investigator. The difference is accounted for by this author by applying the laws of chemistry. If the colloid uric acid is allowed to remain for a considerable period of time in any given locality, and is added to from time to time or precipitated by the ingestion of acid foods and drinks, a combination finally takes place with the soda salts present in the circulation, and biurate of sodium crystals are deposited, resulting eventually in gout. Previous to the formation of crystals, and while the urates are still in the colloid form deposited in the muscles and joints, we have the condition known as rheumatism—which is denominated "muscular" in the former case, and "articular" in the latter.

It is evident that the solvent and eliminative mode of treatment is indicated here, as in the conditions previously described. It is more especially in the treatment of chronic cases, that thialion has proven superior to other anti-rheumatic remedies, as may be seen by referring to the reports in the articles published elsewhere in this brochure.

We would direct especial attention to the following two articles by the late Professors Phelps and Manley of New York City: to wit:

(a). "PURULENT, TUBERCULAR AND RHEUMATIC HIP-JOINT DISEASE," by A. M. Phelps, M. D., New York. (Reprinted from the *Peoria Medical Journal*, Dec., 1898.)

(b). "CONSTITUTIONAL TREATMENT IN JOINT INJURIES," by Thos. H. Manley, M. D., Ph. D., New York. (Reprinted from the *New York Lancet*, Jan., 1901.)

5. LIVER TROUBLES.

The liver has been not inaptly termed "the mind of the body." By this is meant that it exercises a general supervision and watchful care in protecting the body from the poisonous effects of its own activities. It is the great "scavenger" the cleanser, the purifier of the body. It is the final oxidizing depot of the disintegrated waste products of the amido-acid series, resulting from purin and proteid metabolism. It completes the transformation and retrograde change of these substances from "non-diffusible colloids into crystalloid, dialyzable materials" (e. g., into urea) before they pass into the kidneys for final excretion. Were it not for this organ, the blood which is normally the "life giving fluid" would speedily be filled with waste poisons and become the death giving fluid. Some idea of the importance of its work (from the chemist's standpoint) may be understood, when it is remembered that the products of its activity are recognized as the results of hydrations, oxidations, reductions and synthesis, *such as can be obtained only by the action of the most powerful reagents.*

In the average healthy individual from 1½ to 2 pints of bile are manufactured every twenty-four hours. Bearing in mind that this is not only a secretory but an excretory fluid, and that it serves as a medium for the removal of under-oxidized products of tissue catabolism, it will at once be understood why symptoms of poisoning always result whenever the liver fails to perform its accustomed work. The blood becomes charged with waste products resulting from the disintegration of the nuclei of worn-out tissue cells (i. e., the so-called leucomains or alloxins of the uric acid group, adenin, xanthin, hypoxanthin, guanin, uric acid, sarkin, creatinin, creatin, etc.), besides those other toxins absorbed from the intestinal tract which result from the decomposition of food substances imperfectly digested; or from retained faeces.

It is well known that all animal foods that contain purin substances (the extractives) lead to the introduction of uric acid into the body. In the metabolism of these purins and other nitrogenous matter, under the stress of over-exertion on the functioning power of the liver it is reasonable to believe that the result is not perfect, and that, instead of forming urea, which is quite soluble and readily thrown out by the renal emunctories, we have an excess of uric acid not near so soluble, and which is only in limited quantities capable of being so eliminated. The condition which results is often called "hepatic dyspepsia," or "hepatic insufficiency." The patient frequently experiences pain in the right hypochondrium, the bowels are confined, and there is a tendency to piles. These symptoms usually occur about the middle period of life and in persons who take little exercise and eat and drink to excess: a period of life which corresponds to the time when men have passed the active stage of existence and are beginning to "lay off," take things more easily, and, as they term it, "to enjoy life."

Among the cases which the general practitioner is called upon to treat, few are more common or more troublesome than those depending upon hepatic torpor and commonly classed as bilious attacks, a condition due to improper action of the liver. The so-called bilious attacks may occur periodically or at rare intervals. There are present lassitude, headache, nervous depression and an icteroid hue to the skin and conjunctiva. If untreated, the attack, after continuing for two or three days gradually wears off and the sufferer regains his usual health, or there follows a more or less chronic condition of hepatic torpor, evidenced by sallow skin, yellow conjunctiva, lassitude, nervous irritability and constipation.

Familiar to every practitioner is the countenance of the "bilious" patient, *his sallow, yellowish skin, dull eye, sodden tongue covered with a thick, yellowish*

fur, offensive breath and complaints of nausea, lack of appetite and constipation, alternating with attacks of diarrhoea. All these clinical phenomena are undoubtedly due to inactivity of the liver, i. e., an improper performance of its physiological functions.

In the treatment of these cases thialion is almost a specific. It acts indirectly by cleaning out the bowels and stimulating the excretory apparatus, and directly by stimulating the liver and producing a flow of liquid bile. Its action in increasing the fluidity of the bile is very marked, and its use is thus indicated in gall-stone cases and in those predisposed to attacks of biliary colic.

Inasmuch as normal bile is a strongly alkaline fluid, containing notable quantities of sodium salts, it is quite probable that the effect produced by the alkaline cholagogue is principally of a chemical nature. In other words, like the blood itself, the bile (in the lithæmic patient) becomes subalkaline, resulting in the precipitation of colloid waste and the production of a semi-fluid, *viscid* mixture. Furthermore, owing to the lack of a proper proportion of alkaline constituents usually furnished by the blood, and which are essential to the synthesis of the bile acids and urea, the function of the liver as a depot or crematory for burning up waste material is no longer thoroughly performed, and the circulation remains charged with metabolic products of the xanthin type while the hepatic ducts are filled with a thick, *viscid* bile and mucous, which may result in irritation and catarrh. Is it, then, a small matter to clear the way for a fresh onflow of bile along the natural passages, partially obstructed by a languid current?

The action of thialion in increasing the alkalescence of the blood and freeing the obstructed capillaries of the colloid urates, permitting an increased flow to the glandular organs, is seen in the well-known diuretic and laxative effect which it produces. Its action in this respect is evidently due to the cholagogue alkaline sodium salt which it contains, in conjunction with the solvent action of its lithia. Its definite therapeutic indication, therefore, is to stimulate hepatic secretion and enhance the function of this organ in the line of catabolism of nitrogenous waste. In other words, it is indicated in the treatment of that class of cases so common to the general practitioner, and which can be grouped under the following symptoms—malaise, headache and a feeling of weakness on arising in the morning; impaired appetite, faulty digestion, fatigue, vague pains in the limbs and back and (to many of our business men) want of concentration of mind to their work, nervousness, broken sleep at night, worry, mental inability to carry out the accustomed duties. The finer instruments of precision may fail to reveal the cause of these symptoms, but it is evident that the patient is suffering from auto-toxæmia, or “irregular gout” due to *hepatic insufficiency*.

6. BRIGHT'S DISEASE.

When we consider the constancy and rapidity of tissue change, the large mass of new material to undergo construction and of waste material to be disposed of; and that the kidney is at once the avenue for the removal of the most complex forms of tissue waste, and the by-path along which the absorbed products of intestinal decomposition are removed; that it is also subject to marked and frequent variances in the quantity of the excretory materials delivered to it,—then it is not surprising that the selective function of the renal filter should occasionally become disordered, and elimination by that channel be imperfectly performed. Furthermore, in such an atmospheric medium as we live, where sudden exposures to chills occur, the functions of the skin are habitually depressed and an undue share of the work of elimination is again thrown

upon the kidneys. But it is not altogether, in this case, simply an excess of work that the kidneys are called upon to do, for as is well known, suppression of the perspiration is followed by an increased acidity of the urine; and from this we may infer diminished alkalinity of the blood leading to the accumulation of *uric acid* in the circulation, and the deposition of its salts in the various tissues of the body including the canaliculi of the kidney itself. Again, salts and extractives frequently appear in the blood as the result of an imperfect nitrogenous metabolism in the tissues, upon either its constructive or destructive side, and thus an excess of the products of disassimilation are delivered to the kidney to be disposed of necessitating extra work of elimination, the result of which, if continued, may be easily foreseen, for it is a well-known pathological law which links together excessive function and proneness to disease. The most interesting and important of these substances formed in the body, which have yet been discovered, are those of which we may take *uric acid* as the type, and of these, many of the so-called "alloxuric bases" have been shown by recent investigations to readily dissolve in the tissue juices, producing distinctly toxic effects.

In summing up therefore, it may be said, that preceding the stage, usually denominated "Bright's disease," an auto-intoxication process has been going on, resulting in a vitiated circulation and diseased condition known as "uric acid toxæmia," among the more direct causes of which may be enumerated: (1) excessive nitrogenous waste from "high living" (or from certain fevers); (2) increase of the raw material from which uric acid toxins are formed, i. e., the excessive use of purin-containing foods, or foods rich in nucleins; (3) gastrointestinal indigestion and fermentation, from over-feeding, etc.; (4) absorption of the products of retained fecal matter due to constipation; (5) any factor causing functional disturbance of the liver—the great urea forming organ of the body—resulting in the formation of suboxidation products of the uric acid type; (6) frequent chilling of the bodily surface, which checks perspiration from the skin, resulting in subalkalinity of the blood, the retention in excess of uric acid in the circulation and the subsequent deposition of its salts in the various connective tissues of the body.

In the treatment of Bright's disease, if we are to draw any inference from the clinical history, we have decidedly to deal with more than one set of organs—the kidneys. "In our endeavors," says one author, "to favorably influence the progress of the disease, we may with profit teach our art to follow nature's lead and assist her in her heroic effort at a conservative systemic compensation." The problem before us in the management of the disease will always include our utmost effort to conserve the damaged kidneys, and, if possible, stay the progress of the degenerative changes there, but it is no less incumbent upon us to maintain the *status quo* in the circulatory system. No greater mistake could be made than to approach the question of treatment solely from the standpoint of the kidneys, and leave the overburdened circulatory system and glandular organs to shift for themselves.

Furthermore, it is not only desirable to promote the elimination of toxic material already formed, through every channel possible (kidneys, skin and bowels), but to prevent the formation of any more, by regulating the quality and quantity of food ingested, and assisting the organs upon which its transformation into assimilable products depends. For this purpose, no more desirable therapeutic agent than thialion has yet been discovered. It not only increases the excretion of uric acid, but aids in the elimination of *urea*, as may be seen from an examination of the urine after a few doses of the drug have been taken. We believe that it is owing to its eliminant power in this respect that the beneficial effects observed from the use of thialion in Bright's disease are largely due.

[*N. B.* We would direct especial attention to the interesting description of a case of nephritic colic and renal calculus, in the following article by Dr. Arch Dixon, Sr., Ex-President Mississippi Valley Medical Association]: to wit:

(a). "URIC ACID TOXÆMIA," by Arch Dixon, Sr., M. D., Henderson, Ky.
(Reprinted from the Texas Medical Journal, Sept., 1900.)

7. ASTHMA AND HAY FEVER.

The fact that asthma frequently alternates with such diseases of the arthritic diathesis as neuralgia, migraine, angina, gout, etc., soon led to the belief that it was probably due to the same factor which was common to these complaints, and that all were manifestations of a general toxæmia. It was not long before it was discovered that the asthmatic syndrome not only resembled that of the others in the manner and source of its inception, but was also alike in its prodromal symptoms as well as in the character and amount of its urinary water and solids, before, during and after the attack. Like epilepsy, migraine, hysteria, eclampsia, and other so-called "spasmodic neuroses," the asthmatic seizure is usually preceded and accompanied by languor, headache, sleeplessness, low surface temperature, distended veins, thready pulse, cold extremities, diminished secretions, scanty urine, and various other signs indicative of an impeded capillary circulation. In other words, we have the characteristic picture of uric acid *collæmia*.

At the close of, and immediately following the paroxysm, will be observed a striking reversal of all these symptoms; but especially marked is the abundant flow of pale, limpid urine—neutral or alkaline in reaction, and *loaded with urates*. The fact that the attack of the asthmatic is so often ushered in during the small hours of the morning, at the height of the alkaline tide—in the midst of the "uric acid storm"—when the general circulation is charged with urates of which it is attempting to relieve itself, is but another indication that this toxin is an important factor to be reckoned with in any consideration of the pathogenesis of this complaint. Instead of manifesting itself by an increased elimination with the urine—as is the case with the healthy individual at these hours, and as is especially necessary if it is present in excess of the normal—it is, on the contrary, retained in the system, owing to subalkalescence of the blood or a change in its solubilities from some other cause, and the result of its retention is evidenced by the various toxæmic symptoms above described: relief, however, being prompt and effective as soon as its removal is assured, as witnessed by its appearance in bulk in the urine at the close of the attack—whether asthmatic, neuralgic, epileptic, cephalalgetic, clamaptic, or otherwise.

It will be readily understood from the above, that thialion is not given to relieve an existing attack, but to remove the disturbing factor from the system and prevent the occurrence of subsequent attacks.

8. CONSTIPATION.

Some of the essentials of treatment of constipation, in which the presence of an excess of uric acid in the system has become a complicating factor, have already been hinted at when considering the subject of "causes and effects" in this connection. In the first place, the patient should be made to understand that frequent artificial purgation by means of strong "cathartics" is an exceedingly pernicious practice and should be condemned, as it can only result finally in the production of the vicious "pill habit" and "habitual constipation." He should be taught to appreciate the difference between *forcing* nature and *aiding her in her efforts to remove waste products from the body, and keep in good*

repair all four avenues of escape, viz.; (1) expiration *via* lungs; (2) transpiration *via* skin; (3) urination *via* kidneys; and (4) defecation *via* bowels. The first two means of exit may be likened to flues which eliminate smoke and gases from the fuel consumed in the body, while the third disposes of the ashes, and the fourth carries off in addition the nonusable material or "clinkers."

It will be seen that if for any reason one of these exits should become obstructed, or but partially perform its work, the others will be called upon to perform extra service and a kind of service for which they are not especially adapted; for their respective duties are so peculiar to each, and yet so interdependent, that the work of one cannot be neglected without interfering with that of all the others. As the clinkers obstruct the grate to the stove and prevent free oxygenation and combustion, *sometimes putting out the fire entirely*, so does the obstructed intestinal canal result in an ill-burning fire or lowered metabolism in the human economy; and lowered metabolism is the inevitable precursor, as we know, to the formation of suboxidized (or partially burned) products of the uric acid type. As the liver is a human grate which separates combustible material from the clinkers of the system, it is, of course, of the first importance that it should not be permitted to become clogged by neglecting to remove the refuse. Let it be our duty, then, to keep clear of obstruction both the flues and grate of our system.

In regard to the time or *duration* of the treatment with thialion, it can only be said that each individual case must be studied by itself, and the physician must not only use discretion but depend upon his own judgment. In some instances of so-called "habitual" constipation, it will be necessary to persist in the treatment for several weeks, though, of course, the dose is gradually reduced or taken less frequently until regular daily evacuations occur without assistance. One prominent author recommends that a drachm of the salt be taken in a glassful of hot water "every morning for a week; then every other morning for two weeks, twice a week then for a month, and once a week for another month," at the end of which time, he says, "the patient will be perfectly well." Though, of course, this particular plan cannot be adopted in every case, yet it may be taken as a fairly representative method, and one which will be found applicable in the majority of cases.

No better commentary on the value of thialion in the treatment of these cases need be desired than that contained in the recommendations offered in the following articles, written by three eminent physicians, whose names are familiar to nearly every general practitioner in this country; to wit:

(a). "THE TREATMENT OF CONSTIPATION" (A Clinical Lecture Delivered at the Hospital College of Medicine, Louisville, Ky.), by Prof. Joseph M. Mathews, M. D., LL. D. (Reprinted from *New England Medical Monthly*, Nov., 1899.)

(b). "CONSTIPATION IN TUBERCULOSIS" (A Special Lecture Delivered at the Coll. Phys. and Surg., St. Louis), by Prof. Wm. Porter, A. M., M. D., St. Louis. (Reprinted from the *National Medical Review*, Nov., 1899.)

(c). "THREE CASES OF LEAD POISONING AND THEIR TREATMENT," by William C. Wile, A. M., M. D., LL. D., Danbury, Conn. (Reprinted from *International Journal of Surgery*, June, 1898.)

9. URO-GENITAL DISORDERS.

Owing to its great solvent power, thialion is a most energetic remedy for removing and dissolving calculous or gravelly deposits in the bladder or kidneys. From the fact, too, that it renders the urine neutral or slightly alkaline, and holds in solution the urates and uric acid, thus preventing their deposition,

it is especially useful in all irritable and inflammatory conditions of the bladder. In cystitis, it is of the greatest value in soothing and healing the inflamed mucous membrane, preventing the deposit of uric acid and rendering the urine mild and unirritating. Cases are reported, too, in which it has (owing to its solvent power, and by keeping the urine steadily alkaline), succeeded in disintegrating and removing piecemeal, uric acid stones of considerable size, both from the renal pelvis and the bladder.

10. HEADACHE AND MALARIA.

The beneficial results experienced from the use of thialion in relieving headache, may doubtless be attributed to its well-known solvent and eliminative action in producing a plus excretion of toxins of the uric acid type, thus freeing the capillary circulation of the katabolic products which periodically collect and are deposited within their walls to press upon and irritate the contiguous nerve tissue, resulting in the production of pain. That the "gouty headache," like pain in the "gouty toe," is due to the precipitation of colloid urates in the capillaries at the seat of injury, is a theory which is now fast becoming generally accepted. That the cerebral capillaries should become the point of disturbance in one case, and not in another, depends entirely upon local conditions. If the patient is constantly engaged in mental work, or is frequently exposed to emotional shocks, causing a flux of blood through the vessels of the brain, the capillaries in that vicinity will not only be called upon to do extra duty as supply tubes, but must also become the outlet for the waste products caused by the wear and tear of the nervous tissue at this point. It will be seen, therefore, that if such a patient is goutily inclined, i. e., his general circulation already contaminated with the urates—the deposition of the latter is likely to take place in the over-worked cerebral vessels, thus localizing the irritation and giving rise to the symptom known as "gouty headache."

To be successful in the treatment of this condition, it is obvious that some means should be observed to prevent the blocking up of the capillaries by the waste products referred to, and to cause the removal of the latter if already existing. The emunctories of the body should be urged to a proper performance of their function, while the solvency and alkalescence of the blood should be brought to a point to hold the offending substance in solution, or to reabsorb it when already deposited. In other words, if a "gouty headache" be due to an excess of colloid urates (or other suboxidized waste of the uric acid type, xanthin, hypoxanthin, etc.,) in the cerebral capillaries, every effort should be made to effect the removal of this toxin from the system.

Scores of cases have been reported to us concerning the value of thialion in the treatment of MALARIA, this drug being used instead of calomel, as an adjuvant to quinine. The following is a fair sample of the reports coming to us on this subject:

"GENTLEMEN: My experience in the use of thialion has been highly satisfactory. During the past two months I have been using it in malarial troubles. I exhibited thialion in eight cases of malaria and did not give calomel. In five cases I used calomel. I found thialion more satisfactory.

Respectfully,

CYRUS GRAHAM, M. D.,
Pres. Ohio Valley Med. Asso."

Henderson, Ky., Oct. 1, 1901.
It will at once be understood *why* a uric acid solvent and eliminant of the nature of thialion, has proven so beneficial in the prevention and cure of malaria. Its therapeutic value in these cases, as will be seen, is two-fold; viz.: 1. It enhances the action of quinine by cleaning out the renal and intestinal tract

and rendering the absorption of this drug more speedy and certain. 2. It removes waste of the uric acid type from the blood, increasing its alkalescence, thus rendering it a less favourable medium for the growth and multiplication of the spores of malaria. Though calomel fulfils in a measure the first of these indications, yet it is entirely lacking in the second; and, for this reason, we conceive, thialion has been found superior to it as an adjuvant remedy to quinine in the treatment of this disease.

11. SKIN DISEASES.

There are many skin disorders which are due to the presence of some irritant obtained from the circulation, which has in turn become contaminated owing to the clogging up of the "sewers" (kidneys and bowels), or because the great "scavenger" of the body (the liver) has but partially performed its work. It is in these conditions that toxins of the uric acid type play so important a part. They are retained in the circulation and all that is sometimes required is a slight change in the solvency of the blood, or decrease in its alkalescence, due to exposure to cold, acid drinks, over-feeding, debauchery, indigestion, etc., to produce a deposition of the urates and an attack of gout or rheumatism, or (if in the skin), eczema, urticaria, acne, psoriasis, etc.

Theoretically, therefore, it would seem that some remedy which acts upon the liver and bowels would prove beneficial in clearing up the skin, and such, in actual practice, has been found to be the case. No physician of any considerable experience will fail to empty out the bowels when a patient presents herself who desires a more healthy complexion, or wishes to rid herself of some unsightly eruption. But the mere clearing out of the bowels is by no means sufficient. A stimulant of the hepatic function is required, while the kidneys should also be called upon to do their share of the work. This latter treatment is of especial importance in cases of uratic and calcareous deposits in the skin and conjunctivæ, and these are the most stubborn ones to treat. The remedy, at the same time, in addition to its cholagogue and diuretic properties must be a solvent of the urates, for in no other manner (after once being deposited) can the latter be reabsorbed into the circulation and removed. Thialion has proven itself of considerable value in certain cases of this kind.

[*N. B. The following article contains an exceedingly interesting report of a case of chronic psoriasis, submitted by Prof. C. H. Powell, of St. Louis:*]

(a). "CASES OF PSORIASIS, HEPATIC TORPOR, GOUT AND CORPULENCY," by C. H. Powell, A. M., M. D., Prof. Clinical Medicine, Barnes' Medical College, St. Louis. (Reprinted from *The North American Journal of Diagnosis and Practice*, March, 1899.)

12. GASTRIC DERANGEMENTS.

The fact is now generally admitted that when the alkalescence of the blood is diminished from any cause, the excretions from it become more acid; and *vice versa*. A strongly acid urine, therefore, and "sour stomach" (due to gastric hyperacidity) necessarily go hand in hand, and both symptoms would often be found coexisting in a case of uricacidæmia. If this be true, the speedy effects observed from the use of thialion in such cases are evidently due in great measure to the antacid properties of the remedy and its power to remove toxins of the uric acid type from the circulation.

Again, we know that gastric disorders of this character are often the expression of the sympathetic relationship which exists between the stomach and the contiguous organs of digestion—liver and bowels. We have no doubt that

much of the benefit derived from the employment of thialion in these cases is also due to its well-known cholagogue action in stimulating the flow of bile and initiating peristalsis, thus increasing the functional activity of liver and bowels.

The benefit derived from the use of thialion in cases of alcoholic gastric catarrh, has been found to be especially marked, and may be seen from the following:

Reference:

(a). "THE TREATMENT OF ALCOHOLIC GASTRIC CATARRH," by Buchanan Burr, M. D., (Harv.), Ex-Chief Med. Exam. N. Y. Life Ins. Co. (Reprinted from *Louisville Monthly Journal of Medicine and Surgery*, June, 1901.)

13. EYE, NOSE AND THROAT.

Specialists are recognizing the importance of constitutional treatment in certain disorders of the eye, nose and throat. They begin to realize that the local disturbance is often but the manifestation of some systemic dyscrasia and that the latter should receive attention if success is to attend their efforts. Especially is this true of naso-pharyngeal catarrh, the primary cause of which is now recognized to be some hidden constitutional trouble—usually an auto-toxæmia due to the retention of underoxidized waste tissue products of the uric acid type in the circulation. It is unnecessary to reiterate our oft-repeated statements concerning the efficacy of the hot thialion solution, which, as a solvent of the urates and an eliminant of retained waste, has yet to find its equal. And we believe that this is the chief therapeutic indication in many of these cases. Our object is to stimulate the functional activity of the excretory organs—liver, kidneys and bowels—and relieve the capillaries of the impediment to a free and unobstructed flow to every tissue of the body—especially the mucous membranes, and in this way succeed in restoring a healthy nutrition to the parts affected. We believe that *elimination* of perverted secretions is absolutely necessary in the treatment of nearly all diseases.

14. PUERPERAL ALBUMINURIA.

The theory of auto-intoxication, which is now steadily gaining ground, will ultimately be considered the only rational one in discussing the etiology of puerperal eclampsia. The intermediate products of nitrogenous metabolism—which the liver has failed to arrest and transform—remain in the circulation to cause the auto-infection manifested by headache, vertigo, digestive disturbances, visual irregularities, insomnia, and various other nervous symptoms, which usually precede and usher in the "convulsive seizures." One of the great danger signals, therefore, which we may look for in lieu of albuminuria, is the absence of a normal amount of urea, (the end product of nitrogenous metabolism) in the urine. For it must be remembered that although albumen may be absent (which is supposed to be an indication of safety), yet the amount of urea eliminated may be far below normal, in which case our prophylactic measures against eclampsia should at once be instituted.

As one author correctly states: "The perfunctory examinations of the urine for albumen during the latter weeks of pregnancy are not sufficient." A far better plan is to determine the amount of urinary solids and consider one-half of this finding to consist of urea.

In the drug treatment of this condition, our special aim is to effect the removal of accumulated waste products from the body by way of the kidneys and bowels. For this purpose, hot water and thialion are probably the most effectual agents that can be employed.

For some exceedingly interesting and instructive remarks on an allied subject, we take pleasure in directing attention here to the following clinical lecture delivered in the Clinical and Pathological School of the Cincinnati University, by Prof. C. A. L. Reed, Ex-Pres. Amer. Med. Asso.:

(a). "THE GENITAL FACTOR IN CERTAIN CASES OF NEURASTHENIA IN WOMEN," by Charles A. L. Reed, M. D., L. L. D., Cincinnati, Ohio. (Reprinted from *Gaillard's Medical Journal*, Jan., 1899.)

15. BEFORE OPERATIONS.

On this subject we would direct notice to the article (referred to below) written by Prof. Augustin Goelet, of New York, Professor of Abdominal Surgery in the New York School of Clinical Medicine. The point to which he directs especial attention, is the necessity of establishing a normal functioning activity of the excretory organs, prior to operation,—i. e., find how they digress from the normal standard, and correct the fault before submitting the patient to the knife.

Prof. Goelet believes that in very many people, especially of advanced age, the digestive apparatus and excretory organs are apt to be inactive or impaired and, consequently, their reparative energies will be so weakened after an operation that recovery is doubtful. In such cases (in fact, in all cases, unless immediate operation is demanded) his plan is to spend two or three weeks in getting the patient in condition. He believes in thoroughly cleaning out the intestinal tract and establishing a proper functioning activity of liver and kidneys.

Among other things he recommends thialion for this purpose. "There is no other drug," observes he, "the continuous administration of which acts so reliably and satisfactorily without deleterious effect. It may be continued for days, producing two or three free evacuations each day without the least depression. It arrests fermentation not alone by discharging bile into the intestine, but also by re-establishing a normal alkalinity of their contents; and, at the same time, it increases the secretion of urine and renders it alkaline."

Reference:

(a). "PREPARATION OF THE PATIENT FOR ABDOMINAL OPERATIONS," by Prof. Augustin H. Goelet, M. D., New York City. (Reprinted from the *Charlotte Medical Journal*, Dec., 1898.)

16. DENTAL TROUBLES.

It is evident that the teeth and gums depend for their growth and sustenance upon the same general nerve and blood supply as that furnished other special tissues of the body, and all are subject to the same physiological laws and pathological disturbances. To properly treat or preserve a given part, whether by mechanical means or otherwise, it is essential to understand that such part is often vitally influenced by some other part with which its relations are most intimate and constant—i. e., the nerve and blood supply, and secretions of the mouth, in the case of teeth and gums.

The blood dyscrasia which oftenest produces acid secretions in the mouth, and causes precipitation of deposits in and around the teeth, leading to degenerations of the various parts, is well-known to the physician as "lithæmia," or "uricacidæmia." Many dentists have already become convinced of the futility of attempting to cure certain cases of caries and pyorrhea by the adoption of mechanical means and local antiseptics alone. They recognize the necessity of constitutional treatment in order to sweep out the offending urates from the

system. For this purpose, several prominent stomatologic surgeons (as Prof. Eugene S. Talbot, of Chicago) have employed thialion with remarkable success, and have submitted clinical reports concerning its practical value as a solvent in all conditions where such an agent is indicated.

DIRECTIONS FOR USING THIALION.

In administering this drug the following specific direction may always be observed; viz.:

1. Dissolve a teaspoonful of the salt in half a glass of hot water.
2. Add sufficient cold water to reduce temperature of the liquid to the just drinkable point—then drink the whole at once.

If only one daily dose be given, it should be taken the first thing upon arising in the morning—an hour before breakfast.

In lieu of the plain, cold water, which is added, Prof. Thos. H. Manley, of New York, (Cf. *New York Lancet*, Jan., 1901) suggests the addition of aerated water to which some pleasant syrup has been added; while Prof. Augustin Goelet of New York, (Cf. *Charlotte Med. Jour.*, Dec., 1898), recommends that a small piece of lemon peel shall be placed in the bottom of the cup. These respective methods were employed to counteract the unpleasant flat taste which the medicine possesses for some people.

When but one dose per day is required, Prof. C. A. L. Reed, of Cincinnati, ex-Pres. Amer. Med. Asso., prefers that it should be given in the evening. In one of his lectures, delivered in the Clinical and Pathological School of the Cincinnati University of the Cincinnati Hospital, Dr. Reed says:

"I use thialion by giving a teaspoonful in hot water before meals. In the course of thirty-six to forty-eight hours, its gently laxative effect is realized. From this time on I give it less frequently. By the end of the next day the systemic effect is manifested. I am rather fond of giving a full dose of it before retiring—an innovation, I believe, in the manner of using it, but I have been able easily to thus perpetuate its once established effects by a minimum of both drug and dosage. The bowels are thus put into a condition of normal activity." (Cf. *Gaillard's Medical Journal*, January, 1899.)

In a special lecture on "Physical Diagnosis," delivered at the College of Physicians and Surgeons, St. Louis, in 1899, Prof. William Porter, of St. Louis, agreed with ex-President Reed, in regard to the evening dosage. (Cf. *National Medical Review*, Washington, D. C., Nov., 1899.)

Reports have occasionally come to us that the stomachs of some delicate, nervous women are opposed to the introduction of the hot thialion solution. But on investigation, it will usually be found in these cases that the trouble is due to the fastidiousness of the patient herself, and that, by insisting upon its employment, the difficulty becomes tided over after the ingestion of three or four doses.

THE USUAL PLAN.—On the first day of the treatment, a dose is given every two hours (fasting during this period) until a free, "mushy" movement from the bowels occurs—usually after the fourth or fifth dose. Thereafter a dose is given twice (or thrice) daily—the first thing upon arising in the morning and the last thing before retiring at night. This is kept up for a fortnight, one month, or longer. The dose is then reduced to once per day—the early morning dose; and afterwards, to twice per week.

The chief object of prescribing thialion is to remove an excess of uric acid from the system; and, to accomplish this purpose, it should be given in sufficient dosage to keep the bowels fairly regular and hold the urine neutral, or faintly alkaline. In chronic cases, the treatment should be persisted in for three or

four months, if necessary. During the first two or three days, the symptoms are often aggravated. We have explained elsewhere the cause of this unique action of the remedy, and stated that such effect is only temporary.

URIC ACID TESTS.

[*Murexid Test.*]

To determine the presence of uric acid in the urine, by chemical means, the following "Murexid Test" is probably the simplest; to wit: "Evaporate to dryness at a low heat over an alcohol lamp, a few drops of urine in a watch crystal; add a drop or two of nitric acid and again cautiously evaporate to dryness; a red residue remains. Now add a drop or two of ammonia solution. The formation of murexid, which is shown by a beautiful purple (purpurate of ammonia), indicates uric acid or urates." The above method is sometimes unsatisfactory owing to tardy results and the pink (instead of purple) color produced. We have found by experience, that a slight excess of ammonia destroys the color, and that it must be dropped into the dish *without at first letting it come directly into contact with the residue*. Prof. Samuel E. Earp, of Indianapolis, recommends that a volatile salt of ammonia be used instead of a solution. "If," says he, "the salt is placed on a metal plate, and covered with the evaporating dish, the heat from the flame underneath causes quick volatilization, and it will be found that the purple red (purpurate of ammonia) color covers the evaporating dish completely on its inner surface."

[*Approximate Test.*]

For ordinary practical purposes, the approximate amount of urates present may be determined as follows:

"Strongly acidulate some urine in a test-tube with hydrochloric acid and set aside for twenty-four hours. An examination, then, will reveal crystals of uric acid collected in the bottom of the container, also some on the sides and some floating on the surface of the urine. By testing the urine in question against a companion-tube holding an equal quantity of normal urine and treated in the same manner, an approximate comparison may be made which will be accurate enough for ordinary purposes. It must be remembered that nearly the whole, if not all, of the uric acid thus made evident is obtained from the decomposition of the urates with the consequent liberation of the acid."

[*Ocular Test.*]

The presence of an excess of uric acid or urates in the urine is usually made evident by the physical appearance of the urine itself. For instance, a copious deposit of red sand in the vessel in which urine has stood for three or four hours only, points usually to excessive excretion of this substance. The urates being much more soluble in warm than in cold water the urine may be clear on voiding, but after becoming cold may deposit quite a sediment. This sediment may be yellow, pink or red, and is commonly known as "brick dust deposit." A precipitate of these urates will be dissolved by heating the urine, which will serve to differentiate it from other precipitates. If the urine is scant, high colored, strongly acid, and contains frequent "brick dust" deposits, we have very strong evidence of uricacidæmia.

OTHER URINARY TESTS.

[*Bulkley and Haines' Test.*]

In determining the amount of urinary solids passed in a given case, the entire urinary output for the 24 hours should be collected. This should always be insisted upon, and the importance of it impressed upon the mind of the patient.

The quickest and easiest method of ascertaining results, is that recommended by Bulkley and Haines, who give the following simple rule; viz.:

"RULE. Multiply the number of ounces for the twenty-four hours by the last two figures of the specific gravity and add to the result ten per cent."

The answer will be in grains and will give a very close approximation to the amount of urinary solids passed by the patient in twenty-four hours. For instance, if total quantity of urine is 40 ounces and specific gravity 1020, there would be $40 \times 20 = 800$ plus 80—880 grains solids. One-half of this amount (440 grains) would fairly represent the total quantity of urea excreted during that day. In the urine of a man weighing 160 lbs., about 1,200 grains of solids should be found, and one-half that amount of urea."

[Alkaline Urine]

Urine may be alkaline when *first* voided, and it is important that it be ascertained whether this alkalinity is due to the presence of a fixed alkali (sodium and potassium, or thialion) or to a volatile alkali (ammonium). This may be determined as follows: The litmus paper that has been turned to blue by the urine is exposed to the air until it becomes dry. If the blue color then remains, the change was due to a fixed alkali; if not, to a volatile alkali. The former reaction is of no special significance (it may be due to an alkaline remedy which is being taken), while the latter nearly always indicates cystic trouble

URIC-ACID-FREE MENU CARD

I.

Take a glassful of hot water on rising

II.

(a) Select from the following for breakfast:

Milk; rusk and milk; whey; barley water; oatmeal gruel; cornmeal mush; rye mush with pineapple juice; hominy; wheaten porridge; gluten cakes; toasted bread; butter; poached, soft boiled or scrambled egg; baked apples; orange marmalade or stewed prunes (sweetened with saccharin); Saratoga, Vichy or other alkaline water; clam juice; lime juice in water.

(b) Select from the following for lunch:

Bread; crackers; gluten; vegetable soup with barley or rice; puree of corn or celery; milk soups with cereals, flavored; macaroni or vermicelli soup; baked potato; fresh lake or brook fish (boiled or broiled); spinach; new peas (sparingly); new corn; string beans; "greens"; lettuce; cauliflower; squash; turnip; artichokes; carrots; apricots; watercress; ripe banana, etc.

(c) Select from the following for dinner:

Oysters (raw); anything above recommended; and for dessert: custards; tapioca; bread or milk puddings; blanc mange; junket; puddings of milk and eggs; nuts (almonds, filberts, etc.); cream cheese (other cheeses are indigestible and constipating).

III.

If insisted upon the following may be used once a day.

Meats (i. e., roasted fowl, game birds, etc.); fish (i. e., fresh cod, halibut, shad, smelt, etc.); plain lobster (not canned); little neck clams; ripe olives; beans (to be avoided by the constipated or bilious); asparagus (with caution).

IV.

The following articles to be tabooed:

Fried meats; all glandular organs; pork (ham or bacon least objectionable); herring; strawberries; coffee and tea; meat extracts; vinegar; sour pickles; preserves; sugar, objectionable; potatoes (or much starchy food) in amylaceous dyspepsia. Potatoes should be baked in order to explode the starch granules, and render them more digestible.

DIET LIST TO BE USED IN GOUT AND RHEUMATISM.

AS LAID DOWN BY HENRY S. POLE, M. D., HOT SPRINGS, VA.

(Reprinted from the *New England Medical Monthly*, October, 1899.)

To get the best results we must nourish the patient, give him good food and direct the following:

SOUPS.—Consomme, Julienne, tomato, mock turtle and puree allowed. Bean and pea soups prohibited.

FISH.—All kinds of fish are allowed, except canned lobsters—fresh lobsters there was no objection to.

MEATS.—Beef, mutton, lamb, chicken, turkey and game are allowed, but all pork prohibited. The least objectionable form to the latter, however, being ham and bacon, but the patient is better without any pork at all. Veal not allowed.

VEGETABLES.—Spinach, green beans, onions, new peas, lettuce, carrots, parsnips, turnips, raw cabbage, cauliflower, string beans, rice, oatmeal, hominy, allowed.

Grits and mush are allowed, but cracked wheat or wheatena not.

Asparagus allowed unless it is found to irritate; some cases it agrees with, while some it does not. Radishes are not allowed on account of their indigestibility. Sugar beets not allowed. Tomatoes allowed if they agree. Potatoes not allowed unless well baked. Lemons are allowed, provided they are used without sugar. Eggs allowed. *No sweets at all.* Tabooed: sugar, pastry, pudding, candy, *strawberries*, bananas, preserves, jellies, lemons with sugar.

Dried fruits may be taken, provided saccharin is used in the cooking. *Saccharin must be used at all times in the place of sugar.*

The fats—olive oil, gravy, sauces, mayonnaise and butter allowed.

No fried meat of any kind allowed.

Alcoholics disallowed except in cases of debility, when whisky, preferably Scotch whiskey, is prescribed with carbonated water.

For drink, tea, milk with salt in it and coffee for breakfast only.

No water from one hour before to one hour after meals.

Fresh fruits allowed with the exceptions above indicated.

No hot bread allowed of any kind.

Live in the open air, take all the exercise the patient possibly can.

I am glad of an opportunity to express to you my opinion of the value of thialion in the treatment of gout. I have used it in a great number of cases with unvarying success, and in connection with the Hot Springs waters, as my experience with it has been, I do not know of anything to equal it. It unquestionably assists in throwing off the uric acid, and acts delightfully on the liver. I rarely find it necessary to use it more than once a day, preferably one hour before breakfast, and my experience is that the taste is improved, and a better effect is obtained, if a teaspoonful of lemon juice is added to the dose. In order to get good results from its use it must be taken with regularity, until it produces free bilious discharges.

The diet regulations while taking thialion and the gout treatment vary according to the patient's condition, but two general rules may be laid down with certainty. The patient should not eat anything containing starch or sugar, and all wines and liquors are excluded, except in cases where there is great debility, when Scotch whiskey with soda is allowable.

Very sincerely yours,

HENRY S. POLE,
Resident Physician, Hot Springs, Va.

CLINICAL REPORTS BY WELL-KNOWN WRITERS

THREE CASES OF LEAD POISONING AND THEIR TREATMENT.

BY WILLIAM C. WILE, A. M., M. D., LL. D., DANBURY, CONN.

(Reprinted from *International Journal of Surgery*, June, 1898.)

The treatment of both chronic and acute lead poisoning (lead colic), while usually successful, i. e., not many cases dying; still the process is often tedious and uncertain, while it is rare indeed, if by medicines we are enabled to completely eradicate the lead from the system. By removing the grosser parts, by taking the patient away from contact or source of supply, nature finally unaided finishes the elimination in her own inimitable way; but if the patient is not removed from the contact or source of supply, the system becomes so impregnated with the lead that it becomes a very serious factor in health.

There are four prominent classes, who absorb in their daily occupation, lead enough to produce serious results.

1. The first are those who absorb the metal from drinking water which passes through corroded lead pipes. These cases are rarely serious, but to a certain extent interfere with the normal healthy condition of the body.

2. The second class are printers who absorb the metal from handling type, and though most printing offices look out for their employees in this respect, advising frequent slushing of the bowels and taking acidulated drinks, still in spite of these precautions we have some severe cases in this class.

3. The third class are painters, who absorb the metal from the white lead and oil mixture used while painting. The cases in this class are of more frequent occurrence and more severe in the attack than are either of the classes before mentioned.

4. The fourth class are the workers in rubber; this includes to a greater or less degree all men who work in a rubber factory, but more especially are those subject, who are employed in the mixing or calendering departments; for it is well known, in order to vulcanize India rubber, it has to be mixed with various chemicals, notably among which is lead, generally white lead or red lead. The men who weigh out the batches in the weighing room of the rubber factory, and the men working at the calendering machines where the lead is mixed into the rubber by passing through very large, heavy, steel rollers, are the ones most affected. In this class we have a very serious lot of cases. It complicates every other disease. I resided over 15 years at Sandy Hook, Conn., where there is a large rubber factory, and during that time I must have seen a thousand or more cases.

It was my experience that if a man who worked in either of the departments mentioned above, had any other illness he was sure to have a harder time, a graver sickness, require larger doses of medicine, with a prolonged convalescence, than those who did not. I do not remember while residing there, of a single case of pneumonia among these mixers or calenders that ever recovered. Usually about the third day the grim messenger made his visit.

The process of absorption of the poison commences immediately upon the man's assuming this kind of work, and it goes on until lead colic supervenes and the doctor is called in. This is probably the first intimation the man has that he is absorbing lead, though his health has not been good for a long time previous. It takes a longer time to produce this result in some cases than others, for some of the workmen seemed to be more easily impressed by the poison. Rarely does the patient consult the physician till this condition of colic presents itself.

At this time, the examination shows a lead line on the teeth and gums which is deeper, denser, thicker than in any other form of lead poisoning. The deposit on the teeth is so great in some of these cases, where the man has worked for years in these departments, that it can be literally cut off. In these attacks of lead colic the pain is so severe that in the majority of cases a hypodermic injection of morphine is required to relieve the sufferer. Of course this is only palliative but it has to be done.

Then we find the constipation most obstinate and in some instances so persistent that it is impossible to get them to move and the patient dies before relief comes. In these cases

every effort is made, by injections and internal medication to affect their movement, but the bowels are simply immovable. Of course these cases are rare, but they occur just the same in the practice of those who live in communities where such factories are located. If the bowels can be moved, thoroughly cleaned out (saline purgatives being the best), and then kept open, supplemented by the administration of the saturated solution of iodide of potash, 10 drops three times a day after meals, which keeps up the process of elimination, we bring about all that can be expected in this class of cases. The difficulty to contend with is the obstinacy with which the bowels permit themselves to be moved. Weeks have elapsed sometimes before they resumed anything like a normal condition.

The following three cases presenting themselves in quick succession suggested a new plan of treatment which has been so thoroughly successful that I was tempted to present it to the profession with a view to removing some of the difficulties in the path of my brother practitioners. I always sympathize with those who have to deal with many of this class; but I feel confident that if the lines laid down in this paper are carefully followed the doctor's cares will be considerably lightened.

The first case that presented itself was that of John McN., a resident of Sandy Hook, Conn., and an employee of the rubber factory, in that place. He was 42 years old and had worked in that factory for eighteen years, either in the mixing room or on one of the calendering machines. As he stepped into the office door, he presented a typical picture of one of those unfortunates who have absorbed large quantities of lead. His face was pale, he was thin, and as he crossed the threshold he was bent; his face was drawn as if in pain, his step was a tip-toe almost, so as to avoid jar as much as possible, and his first words were characteristic:

"Good morning, Doctor, I've got it agin."

He was suffering from the beginning of an attack of lead colic.

On looking in his mouth, his gums presented in a marked degree the leaden hue, while there was a lead line on his teeth. Familiarity with this class of cases enabled me to make a diagnosis without much of an examination. I ordered him to take a teaspoonful of thialion as soon as he got to the drug store, dissolving it in a cup of hot water. This dose was to be repeated every two hours, fasting till the bowels moved freely, and then he was directed to take a teaspoonful in the same medium each morning on rising. He was to let me know by telephone that night if he did not get relief, and in any event he was to see me in a week's time.

I did not hear from him till the week was up, when he came into the office smiling and happy. He said his bowels moved soon after taking the third dose, and with the movement his pain left him, as is usual in these cases. The trouble has always been in getting the bowels to move. On examining his mouth, I found to my astonishment that the lead line on gums and teeth was very materially lessened, and as I did not suppose that the thialion would do anything more than produce the necessary evacuation, I was surprised.

The results having been so good I ordered him to keep up the medicine, taking it as before, each morning and to report in two weeks. He did not come until three weeks had passed, and then all of the lead lines had disappeared and he was in fine fettle. He said he was in better health than he had been for years before. He kept up the treatment for two weeks more, and a letter received from him a short time since, (three months after treatment) says that he has had no return, though still working at the old post; but, he significantly added, "I take a teaspoonful of thialion, dissolved in a teacupful of hot water, one or two mornings each week, as nothing has ever seemed to do me so much good."

Case two is in striking contrast to the one mentioned first. John W., aged 23, had been working at a calendering machine in the same factory only eighteen months. He stated that for the last two months his health had been bad. Some of his friends thought that it was due to lead, but others said he had been working too short a time to absorb enough of the metal. An examination revealed the lead line well marked on both gums and teeth. The breath was bad; the stomach deranged; appetite capricious; bowels very constipated. He had not had any movement for the last three days, in spite of active cathartics having been administered.

He felt as if he had the malaria "dragging and heavy," with aching muscles and bones. His sleep was like the sleep of the dead, but when he awoke he seemed as tired as ever. Urine scanty and high colored. He had never had an attack of lead colic, so he thought it could not be lead poisoning that he was suffering from.

A teaspoonful of thialion administered in a teacupful of hot water, every two hours, till bowels moved, was ordered. It took three doses to have the desired effect. After this result had been obtained, he was directed to take a teaspoonful each morning for one month. I saw him in three weeks, with the lead lines all gone; the transformation from a sick to a healthy man being complete and wonderful. He kept up the medicine for two weeks more, when he stopped it. He has not had an attack since, which is six months ago.

Case three was of a different type: that is, its origin was from a different cause, and the condition as well as symptoms presented were different. Charles W., a printer, consulted me about two months ago, with all of the symptoms of lead poisoning. He said that for years he had been chronically constipated, being compelled to take some sort of physic, till at last enormous doses had to be taken to get any satisfactory movement. He was addicted to the drink habit and was always worse after a debauch.

When he consulted me, he had been on a long drunk and had as severe an attack of lead colic as I ever saw. He had been a printer for nine years and had never taken anything to get rid of the accumulating lead. He was writhing with pain, while a careful examination of the bowels showed masses of fecal matter packed in the colon, while a finger into the rectum showed that part of this bowel was also filled with feces. So dense was this latter mass that I determined it would be necessary to relieve it by manual interference. His gums showed the lead line, though not so well marked as in the other two cases.

Oiling my hands well, I commenced to break up the masses in the rectum; and quite a job it was. As soon as one mass was removed, another came down until an ordinary sized chamber was half filled. He was by this time becoming exhausted, and while all had not been removed I thought it better to give him a little time to rest. During the interval, I directed a teaspoonful of thialion, dissolved in hot water, to be given every two hours, promising to call again in six hours. After the second dose had been taken, a fair movement was had and a copious one after the third, at which time all of the pain left him. I saw him seven hours after my previous visit; he was sleeping soundly. The after-treatment consisted in a teaspoonful of thialion each morning, with good, nutritious diet. I kept watch of him for six weeks; but the last traces visible of the lead had gone by the end of the third week.

There can be no question of the value of this sort of treatment in these cases; and, while I am not able to explain the *modus operandi*, still, I do know that three cures were effected where heretofore the utmost difficulty had been experienced in getting anything like such results. If we remove the obstruction we do a lot toward relieving our patient, but if we clear out of the system all of the lead we *cure* our patient. I believe that thialion in these cases forms with the lead a soluble salt, which is speedily carried out of the system; just the same as I believe it combines with the uric acid in the system, forming a soluble salt which is easily removed by the ordinary operations of the functions of the body.

URIC ACID IN THE BLOOD. WHAT DOES IT LEAD TO AND HOW CAN WE ELIMINATE IT?

BY GEORGE E. LEMMER, M. D., SECRETARY DANBURY MEDICAL SOCIETY, DANBURY, CONN.

Read and discussed at the regular monthly meeting of the Danbury Medical Society, Oct. 12, 1898.

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We will open this paper by advancing two propositions, which I think are safely within the line of present pathological and chemical research; and, with your patient indulgence, will then endeavor to justify them.

Is not the major proportion of diseases that afflict man due, either to errors in the kinds of foods taken, to excess in their use, or to imperfect oxidation, assimilation and excretion?

Does not a large percentage of such diseases tend directly of themselves to shorten life, and does not the remainder lead indirectly to the same melancholy end, by lowering in individual cases, the inherent power of resistance to the action of the germs and ptomaines of contagious and infectious diseases, and the shock and exhaustion following injuries?

We have lived beyond the time when the pain of passing through an attack of gout or rheumatic arthritis was in no small degree mitigated by the reflection, that after all he who dances should gracefully bend to remunerate the piper; and by the pleasing thought of the many good things yet to be devoured and the smothering thereof, in the liquid fruit of the side-board.

The obverse of the picture—the etiological and pathological perfection of to-day—enables us to catch the shadow of the slow but certain arterial atheromatous, with its resulting hopeless structural changes, that follows in the train of the high liver.

In the man of simple and normal habit, the great toxin resulting from nitrogenous oxidation, uric acid, is thrown off as fast as excreted by the kidneys, in the form of the soluble triple urates of potassium, sodium and ammonia; but in the subjects given to gastronomic excess, oxidation and excretion are almost always defective, hence we find the blood and lymphatic system loaded ever with the pernicious results of imperfect intestinal kidney and liver metabolism, with the subsequent accumulation in the blood and tissues of the insoluble urates and free uric acid.

Taking the mortality due directly to the presence of this effete principle in the system, as in gout, rheumatism, organic cardiac lesions, including coronary sclerosis, renal and hepatic disorders and apoplexy, and thereto adding the deaths occurring during the course of the ordinary self-limited diseases, wherein the fatality is in consequence of vitiated vital force, or is due to pre-existing gastric disorder, the result of past excess,—may not the conclusion be fairly drawn, that as many men die to-day because of error and excess at table, as perish from both hunger and alcoholic indulgence?

It is generally admitted that uric acid is always found in the blood of subjects afflicted with renal disease; and frequently (in those never suspected of having had gout) post mortem examination reveals the presence of urate deposit within the kidney.

Davis, Jr., writing on general atheromatous of gouty subjects, refers pointedly to the atheromatous changes throughout the kidneys; and Sajous points in addition to the gradual progress of the renal disease, the "organ being affected in spots with intermissions in the degenerative changes which are microscopically small until finally large areas are involved." "In these cases," he continues, "the glomeruli and tubules are attacked in a way at times to cause scarcely an appreciable symptomatology, whereas similar changes coming on suddenly, as in the case of a different etiology would cause striking clinical and urinary manifestations."

With reference to the happy result that follows many times, the giving of a full dose of calomel in cases of minor symptoms of uric acid poisoning, it must be remembered that alterations in the metabolism of the liver, affect the excretion and elimination of this toxin in the healthy subject, and as variations in hepatic chemistry depend on manner and amount of food taken, on variety and extent of exercise and on certain nervous influences, it can be readily understood why liver trouble frequently accompanies gouty dyspepsia.

However authorities may disagree as to whether or no uric acid is secreted entirely by the kidneys, or whether its abnormal secretion and precipitation in the blood and tissues be due to excessive use of nitrogenous food, to amylaceous dyspepsia, to the acute febrile conditions, to excess in various alcoholics;—or whether the large amount thrown off under treatment be due to accumulation from past defective excretion, the cardinal fact remains proven that the presence in the blood and tissues of this poisonous result of food oxidation or sub-oxidation, is pregnant with a group of disorders far reaching and grave beyond the belief of observers of a decade ago.

Many diseases and a multitude of symptoms, of heretofore unknown pathology and speculative causation, are now recognized as occurring only under the condition of excessive uric acidity. And if no further injury were done than that accompanying the gouty diathesis, rheumatism and urinary calculi, all of which have for long been recognized as due to this

toxin, the suffering to be endured and lives shortened in consequence, would rank this baneful compound as one of the potent allies of the grim wielder of the scythe and sand-glass. The cumulative results, however, of research along this line, bear evidence to the startling fact that the uric acid diathesis in its causative relation to human mortality, may be classed as a twin factor with the bacillus of tuberculosis.

The major harm to the system from uric acid excess seems to rest on its peculiar power of distributing the peripheral arterial supply. The entire principle of nutrition and excretion depends, for its normal working, on the uniformity of arterial tension and free and unobstructed capillary circulation. Oxygen taken up during inspiration in quantities, however generous, is of value as a conserver of life, only in so far as its imbibition is followed by uniform distribution to individual tissue cells; therefore any impediment to the normal capillary ebb and flow, must be attended with results detrimental and serious, in proportion to the degree and continuance of the circulatory impediment.

Many of our present day observers along this special line, among whom Haig, of London, has attained an enviable distinction, are firmly committed to the opinion that free uric acid in the blood *does* cause contraction of the arterioles and by this interference with interstitial circulation, becomes the prime factor in pathological changes in every tissue and organ of the body. Haig says: "From the clinical history of the uric acid headache, we learn that at the time of the attack, when there is excessive uric acid in the blood and in the urine, the pulse is generally slow and of high tension. It appears that this is due to contraction of the arterioles, and capillaries of which there is abundant evidence in the cold skin and extremities that accompany the headache. Very little experimentation will, I believe, suffice to convince any one, that contraction of the arterioles varies directly with the amount of uric acid that is circulating in the blood. This contraction of the arterioles will produce two results—first a rise of blood pressure in the heart and great vessels on the proximal side of the obstructed vessels—a high arterial tension; and second, a deficient circulation and interchange between the blood and the tissues in and on the distal side of the obstructed vessels."

Thus may be explained our intractable cases of gouty dyspepsia. The secretion of gastric juice being dependent directly and wholly on the capillary supply of blood to the gastric tubules, it of necessity follows that restriction in the supply of the latter, will diminish in like ratio the secretion and flow of the former. Davis thus accounts for the minute foci of degenerative changes in the kidneys of gouty subjects, and which probably precede the advent of interstitial nephritis. Perhaps the more serious results due to this cell and interstitial anemia, are referred to the effects on nerve centers and ganglion, and from which anything may ensue from headache to insanity.

Good observers have for some few years past associated asthma with the presence in the blood of free uric acid; the explanation, to-day, being the accumulation of irritating toxins upon the bronchial mucous membrane in consequence of impaired nutrition.

In a paper read before the Brooklyn Pathological Society as far back as 1885, on "The Nervous Symptoms of So-called Lithemia," L. Carter Gray attributed in many cases the following to the lithemic diathesis—vertigo, cephalalgia, insomnia, nervousness, tinnitus aurium, neuralgia, paræsthesiæ, muscular cramps and witchings, vasomotor disturbances, fever, and, he continues, we may have a delusional mental condition, myelitis of the anterior cornua, hysteria, neurasthenia, epilepsy and disseminated sclerosis. For the purposes of this paper it is quite enough to refer to the fact that the difference between the "lithemia" of '85 and the "uricacidemia" of to-day is simply one of nomenclature.

In the matter of mental irresponsibility, *The Hospital* says: "Dr. Haig is of the opinion that suicide may be traced to errors in diet, the error being the eating of meat, the drinking of beer and tea, and the smoking of tobacco. His facts all fall comfortably into their places in support of his hypothesis! Are there not more suicides among men than among women, and do not men consume more meat, beer and tobacco than women? Again, suicide is more common in England than in Scotland, not apparently because the Scotch are a more canny race, but because the English eat more meat and drink more beer, while the Scotch eat less meat and drink whiskey instead of beer. Uric acid is in fact at the bottom of all this, and

according to Dr. Haig, the incidence of suicide tallies with the daily, annual and life fluctuations of uric acid in the blood; being commonest when uric acid is most abundant; namely, in the mornings, in spring and summer, and in childhood and the full prime of life."

Haig, though unsupported in some of his deductions and standing practically alone in many of them, has the sense of security in his belief sufficiently strong, to sum up one of his brilliant theses as follows: "If my premises are good and my deductions sound, and if uric acid really influences the circulation to the extent which I have been led to believe it does, it follows that uric acid really dominates the function, nutrition, and structure of the human body to an extent which has never yet been dreamed of in our philosophy, and in place of affecting the structure of a few comparatively insignificant fibrous tissues, in which it is found after death, it may really direct the development, life history and final decay and dissolution, of every tissue from the most important nerve centers and the most active glands, to the matrix of the nails and the structure of the skin and hair."

Treatment: The underlying principle here seems to be as clear as is the condition treated—complex. It depends for its success first, on the reduction of the acidity of the body fluids to the degree indicated by slight urinary alkalinity, thereby rendering soluble the accumulated insoluble toxin; and second on the stimulation of the excretory functions of kidneys, liver and skin.

This apparently simple solution of our intricate problem excludes of course those cases in which degenerative changes have already taken place, and even here it does apply in varying degrees short of actual repair of damage done.

Reference need scarcely be made to the utility and in many cases the necessity of augmenting hepatic excretion by regular persistent muscular exercise, nor to the beneficial results of stimulating respiratory action, by increased personal hygiene, frequent baths and massage.

As to table discipline it may be safely stated, that for the subject in whom structural changes are impending, there must be an almost total exclusion from the diet of the purin or nitrogenous foods, of acids, and of alcohol in every form, until frequent urinary analysis bears evidence to the fact, that the urates and free uric acid that were excreted in large amounts on the beginning of the treatment, have been reduced to about the amount normally thrown off in health.

For the multitude of subjects not advanced to the point of tissue lesion, and embracing that large class where positive and permanently satisfactory results may be confidently looked for, the use of meats in moderation is not only allowable but is advised; it being understood that the initial treatment be pushed to the point of clearing the system of acid accumulation and excess, followed for a variable period by medication decided enough to keep the urine *faintly* acid.

In all recent cases coming under my care, I have found thialion so prompt and reliable in meeting the issue, that I have come to prescribe little else in the way of drugs. Its physiological properties of rapid urinary alkalinity, increased diuresis and catharsis, have been attended by a no less marked and satisfactory disappearance of the indications calling for its exhibition, as the following few cases demonstrate.

Thomas B., saloon keeper, age 42, weight 230; came to the office a few weeks ago in the evening, badly frightened because of an attack of vertigo of three days' duration; felt like falling over if he tried to read; had frontal pain and "throbbing of blood in his ears"—had also severe muscular pains along left side and leg, bowels constipated, and stomach in wretched form. Prescribed thialion, two teaspoonfuls in goblet of hot water on retiring, same double dose to be taken before breakfast on following day, after which one teaspoonful before each meal until I saw him again. Called on the third day feeling all right—bowels were moving rather freely; ordered medicine stopped for two days, then continued until bottle was finished, taking one teaspoonful a day on rising from bed. All right in a week's time. No return.

James E., hatter, aged 52, weight 192. Called about three months ago, complaining of feeling sore all over, but more particularly about the head—felt heavy, dull ache all the time—could not remember things ordinarily easy to recall, had not eaten a fair meal in over two weeks—was sure he was in for typhoid fever or some other serious illness. About a year ago

I had treated him for subacute rheumatism. Prescribed thialion, two teaspoonfuls for first dose, then one teaspoonful in tumblerful of hot water before eating, for two days, stop for a day, then one dose before breakfast for remainder of the week; met him on the street two weeks later, said he had never felt better—he had used about two-thirds of his bottle.

Edw. G., business man, aged 42 years, weight 207. Called some five months ago, hardly able to walk from pain across lumbar region and stiffness in legs—frequently had similar, though much milder pains during rainy weather, very little mental effort brought about an acute distressing sense of weariness; had for some time previous been bothered with "sour" stomach—no relish for food—had grown so irritable and "nervous" he made things miserable for himself and family; was of clean habits, did not use alcoholics of any kind. Prescribed thialion in two teaspoonful doses, before each meal, for one day, regardless of over free catharsis, then one dose before breakfast for two weeks, dropping it for a day or two if the bowels grew too free. Took two bottles up to date; has had no return of symptoms; says he feels in condition to fight for a man's life.

DISCUSSION.

DR. WILE in opening the discussion said: "Mr. President, I am very glad to say a word in connection with this subject because, as you all know, I have been one of the greatest sufferers from uric acid. I want to compliment Dr. Lemmer on his exhaustive and ably written paper, which presents to our mind a most vivid picture which will carry its impress for many a day. To those who have not given the subject of an excess of uric acid in the blood particular attention, this paper will clear up many points: it will suggest many questions as to whether the pathology of some of the diseases which have been so difficult to treat in the past has not been wrong, and if we will not have to study again some of the problems that are constantly presenting themselves as how best to relieve suffering and cure disease. One of the most preeminent errors that is made in connection with the uric acid diathesis, is, that when we have an excess it is due to an over abundant production, while, as a matter of fact, it is due to tardy and indifferent elimination. The more we study this question the more we become convinced of the fact that this poison when not eliminated, *aggravates* all diseases and is the foundation and origin of many. Investigators are demonstrating this fact every day. Dr. Vallient, of New York City, recently cited the following case which illustrates the fact that thialion is used with advantage in paralysis, due to lead poisoning; though, I believe, I was the first to call attention of the profession to its value in chronic lead poisoning. The doctor relates that Mr. S. P., a painter forty-three years of age, American, married, consulted him in reference to an existing paralysis of the middle fingers of the right hand, due to lead poisoning of long standing. The case had been treated by electricity, with strychnine and various ways, by many different doctors with negative results. About twelve weeks ago, he commenced treating him with teaspoonful doses of thialion, giving it three times a day, in a cupful of hot water. This was continued for five weeks when the dose was diminished to one-half a teaspoonful in the same medium for six weeks longer. In his letter of September 29th, the doctor says, his patient has now the full use of his fingers and is able to attend to his business as a painter. As no other treatment was used, there can be no question but that the elimination of the lead poison was effected by this remedy; and if it was, an important question arises as to whether or not this man did not suffer from an excess of uric acid in the blood, as well as chronic lead poisoning, for if he did, it is an easy matter for us to understand how the remedy acted so quickly and the cure was so easily effected.

I hold in my hand a letter, written by Dr. Hamilton Kibbee, a distinguished physician of Oblong, Illinois, who describes the case of his son who suffered from chronic Bright's disease of the kidney; also another one from the same source, dated the 13th of September, both of which I have the author's permission to read to you. The doctor incidentally in his letters makes some remarks as to the cause of Bright's disease, which I am sure will prove interesting to you. The doctor says: 'Fully expecting to be disappointed in the results, I ordered four ounces of thialion for use in my son's case. He is a young man twenty-three years of age, who was taken with albuminuria, about seven months ago while at work in Chicago.'

For several weeks he was under the treatment of Dr. Purdy, the distinguished specialist and author of note on diseases of the kidney. By the advice of Dr. Purdy, I finally brought him home, where he has remained, improving in general health greatly by proper diet and rest. I have battled with this case with all a father's anxiety, and have grasped at everything which offered hope; but nothing has ever relieved the uremic symptoms like thialion. Its action has given me the greatest encouragement. His most troublesome symptoms were flushing of the face, congestion of the eyes, pulsation of the temporal arteries and beating of the heart against the chest wall. There was great restlessness and sleeplessness, throwing himself over the bed and moaning. The urine was sometimes (usually) profuse, specific gravity 1010, and it contained always about one-fourth of one per cent. albumin. Urea, by Doremus test, was less than 500 grains in 24 hours. If he exercised it brought on pulsation with increased arterial tension and dizziness. I began the thialion about fifteen days ago, and within three days I could see improvement. His flushed face has disappeared and his eyes are now normal. For the first few days he had pulsations, but they lasted only about half an hour, and for the past three days he has had no pulsations whatever and he says he feels better than he has for a year. I cannot tell you how thankful and hopeful these results have made me, I tremble lest the benefit shall be only apparent and not real.

The boy was morose, despondent and hopeless, now he is his natural self again.

I believe we are all wrong about the treatment of interstitial nephritis. I don't believe the albumin tests are of much value. The thing to keep the finger on is the test for urea—Doremus test the best. The excretion of urea is the barometer that indicates improvement or contrary. The local trouble in the kidney is due to excessive uric acid in the blood. From the fact that almost all cases of interstitial nephritis occur in brain workers, who exercise their brains to excess, I am inclined to believe that the cause of uric acid in the blood is due to brain lesion, something involving the transmission of nerve influence or causing interference with natural normal nerve vibration. Good results from the use of static current to the brain have been reported by Dr. Neiswinger, of Chicago, and my theory is that in these cases normal vibration is restored to the nerve structure of the brain by the electric current and this will account for Dr. Neiswinger's result in the treatment of interstitial nephritis. But get rid of the urea. There can be no question but that this is the first and most urgent requirement while the second thing would be to stop (by electricity or in any manner) the excessive accumulation of uric acid. That thialion will get rid of the urea I have demonstrated.'

This letter was written on the 9th of September; one month and three days from that date the doctor again writes: 'My son has continued to improve up to Friday of last week, when he started to spend the winter with his brother, Dr. Kent V. Kibbee, Professor of Chemistry in the Medical Department of Fort Worth University, of Fort Worth, Texas. For two weeks previous to his departure he had no flush, headache, or other symptoms connected with his kidney trouble and his urine in every respect was perfectly normal even to excretion of urea. Though he suffered from a painful jaw, as the result of the extraction of an ulcerated tooth, he had no nervous symptoms and insisted upon making the trip. He left here on Thursday, and St. Louis on Friday morning, reaching Fort Worth on Saturday night. I had a letter from his brother, who visited us in October last, and he informs me that the boy got to Fort Worth in good order and that he is greatly surprised at the improvement in his condition since he saw him last in October.'

Dr. Kibbee's words convey to us information which ought to prove valuable, certainly the results are remarkable. The trouble is that we have been growing more and more a gouty people, due to the fact largely, that meat being cheap with us, we eat it in excess. The profession has long been looking for a reliable remedy to combat the multitude of ills directly traceable to an accumulation of uric acid in the blood, one which when ingested will convert the insoluble phosphates, oxalates and urates into a soluble compound which can be readily eliminated. This subject confronts the general practitioner daily as he goes his rounds. He has grasped at everything from pure waters down to dangerous drugs, with but little avail and I believe in thialion he has an invaluable agent for good.

My own case, you will remember, was a stone in the right kidney and some of you have seen me at my bedside amid great suffering. My belief is that the stone has disappeared, any way, my pain has gone and I am able to do work that two years ago would have been simply impossible. I believe that stone was dissolved in the pelvis of the kidney by the use of thialion and that remedy alone."

DR. STRATTON has used thialion quite extensively and with satisfactory results. He believed its superiority to other standard remedies used to a similar end lay in its increased power of stimulating liver and kidney metabolism and thereby prompting the eliminations of uric acid or other toxins. In this way he explained its striking results when given in lead poisoning.

DR. LOWE believed the eating in large quantities of vegetables and cereals rich in starch, was almost as great a factor in inducing uric acid precipitation as was the excessive nitrogenous diet. In combating this condition by the use of thialion he has obtained marked curative results, especially in the following conditions. The colic of infants, the persistent cephalgias of young girls, and in asthma—in the latter he has secured results that border on the apparently impossible.

DR. BENNETT had astonished himself and secured the unqualified gratitude of his patients, by the prompt and thus far lasting results obtained with thialion in four severe cases of asthma. The doctor believed he has at last found an every day solvent for his aid.

DR. WADE believed in the uric acid causation of asthma, in the treatment of which by thialion, he has secured results uniformly satisfactory; similar good effects have followed its exhibition in several cases of rheumatism. The doctor believes its happy results were due principally to its power of inducing increased liver and kidney activity and thereby elimination.

DR. GORDON thought it impossible to increase the amount of uric acid excretion by either liver, kidney or skin, until the precipitated toxin was first rendered soluble; all observers being agreed that it is this very insolubility that renders possible the precipitation of the toxin within the tissues.

DR. BROWN was fully committed to the belief in the curative properties of the preparation in question, but he had observed that many of the minor symptoms of the uric acid diathesis could be relieved by remedies that increased hepatic metabolism and catharsis, and he was therefore inclined to believe that the superiority of thialion in the treatment of the gouty diathesis was in consequence of its power to augment diuresis and liver excretions. "For I must say," continued the speaker, "that I have found thialion the most delightful laxative I have ever used.

DR. LEMMER closed the discussion by referring to the fact, that, for many years past, clinicians and chemists had been laboring to find a certain safe and perfect solvent for uric acid as found in the blood. Many agents had come to life that did the work thoroughly in the test tube of the laboratory, but which, on being exhibited within the body, failed partially or entirely of their mission.

"On this property of solvency," continued the speaker, "must rest the primal and fundamental merit of any remedy that successfully antidotes the uric acid toxin; for, though without elimination, the use of a solvent would be of but little or no benefit, yet how absolutely void of results must be the stimulating and increasing of liver and kidney excretion, with the view of thereby throwing off a given precipitate, whose very insolubility renders its passage through the malpighian tufts of the kidneys and the hepatic excretory cells an utter mechanical as well as chemical impossibility."

The speaker believed that many of the minor symptoms of the uric acid diathesis were frequently due to quite a different etiology, and when relieved by a full dose of calomel, flanked by a little rhubarb and quinia, it seemed wanting in proof to assume that explosion of acid toxemia had been prevented.

PREPARATION OF THE PATIENT FOR ABDOMINAL OPERATIONS.

BY AUGUSTIN H. GOELET, M. D.

Professor of Gynecology and Abdominal Surgery in the New York School of Clinical Medicine.
(Abstract from the *Charlotte Medical Journal*, Dec., 1898.)

The importance of careful preparation of the patient when operations within the abdominal cavity are about to be done is universally admitted, yet it often falls short of the actual requirement, because insufficient time is allowed, and because essential features are disregarded. Something more is necessary than the clearing out of the intestinal tract and examination of the urine to exclude albumen and sugar. When practicable, where immediate operation is not demanded, from one to three weeks at least should be consumed in getting the patient in condition.

Careful preparation will lessen the shock of exposure of the peritoneal cavity, minimize the unpleasant effect of the anesthetic and render the convalescence smoother. It will also facilitate the work of the surgeon by overcoming intestinal distension, enabling him to do better work in a shorter time and will materially lessen the mortality following abdominal operations.

It is particularly important to establish a normal functioning activity of the excretory organs, and the digestive apparatus must perform its work properly. To this end we must first ascertain in what respect these organs are deficient and to what extent they digress from the normal standard. Therefore daily examinations of the urine in particular should be made to determine the average voided in 24 hours, its specific gravity and the presence or absence of albumen, sugar and bile. Something near the normal standard must be attained before operation, and the exclusion of bile from the urine is quite as important as to exclude albumen and sugar.

The presence of bile in the urine* indicates an improper action of the liver and that the bile is being absorbed into the circulation and eliminated by the kidneys instead of being discharged into the intestinal tract. Bile is the great intestinal antiseptic and prevents fermentation, hence its absence in the intestinal tract in normal quantity permits fermentation and the result is intestinal indigestion and gaseous distension. The importance of an active condition of the liver is recognized by most operators, but the administration of a dose of calomel a day or two preceding operation is not sufficient in the majority of cases.

It is impossible to unload the intestinal tract by one free purgation, particularly where the intestines are habitually inactive as is apt to be the case in conditions requiring abdominal operations, hence the importance of prolonged preparation. I have found an abundance of fecal matter in the intestines after apparently thorough evacuation extending over a period of several days, and no doubt other operators have had a similar experience.

For thoroughly clearing out the intestinal tract and establishing a proper functional activity of the liver preparatory for operation the following course has been found most satisfactory: Administer every third night at bed-time, at least four hours after the last meal of the day, two or three pills each containing two grains of a reliable extract of cascara and at the same time ten tablet triturates of calomel one-tenth of a grain each. The action of this dose is free from any unpleasant effect, and there is no griping. This is followed in the morning an hour before breakfast by a heaping teaspoonful of thialion (a laxative salt of lithia) in a cup of hot water. Every intervening night and morning a similar dose of thialion is given to maintain an active condition of the bowel which it does by exciting the flow of bile. There is no other drug the continuous administration of which acts so reliably and satisfactorily without deleterious effect. It may be continued for days producing two or three free evacuations each day without the least depression. It arrests fermentation not alone by discharging bile

*A rough test for bile in the urine is to boil a small quantity (about 3 ij) in a test tube and add a few drops of pure nitric acid when if bile is present the specimen changes color and becomes brown or a deep reddish brown.

into the intestines but also by re-establishing a normal alkalinity of their contents, and at the same time it increases the secretion of urine and renders it alkaline.

When the cascara and calomel is no longer required (*and in most cases one dose is sufficient*), thialion is continued up to the day of operation, administering it either once or twice a day as required. It has an unpleasant flat taste in solution in hot water to counteract which a small piece of lemon peel may be dropped into the cup. It may be continued after the operation as soon as it is desirable to act upon the bowels, though at first larger or more frequently repeated doses may be required.

While the bowels are being thus prepared and the liver rendered active, attention must be given to the diet. It is best in most cases to limit the diet to food that will be digested in the stomach, such as meat, particularly lean beef and the white of egg carefully cooked, and to avoid such articles as will ferment readily, for instance, those containing starch, and vegetables. Bread and milk are particularly objectionable. The former because it contains starch and is apt to ferment in the intestines. Then, too, the yeast ferment is not always destroyed by the process of baking. Bread can, however, be rendered fit for food in cases of impaired intestinal digestion by slicing it thin, trimming off the crust and placing it in the oven on a dish, and drying it thoroughly until it is deprived of all moisture and becomes crisp. Milk and any of its preparations are objectionable either before or following colectomy, chiefly because it ferments readily and creates distension. All kinds of sweets are positively prohibited for a similar reason.

It is important to have the intestinal tract free and the intestines collapsed at the time of operation—in fact, this is one of the chief aims of preparatory treatment—hence for two days preceding the operation the food should be of such character as to leave the least possible residue after the process of digestion and absorption. In some instances it is best to give liquid food only for the twenty-four hours immediately preceding, and this must be of a character not to cause the least disturbance of the digestive apparatus.

THE GENITAL FACTOR IN CERTAIN CASES OF NEURASTHENIA IN WOMEN.

A Clinical Lecture Delivered in the Clinical and Pathological School of the Cincinnati University at the Cincinnati Hospital.

BY CHARLES A. L. REED, A. M., M. D., LL. D., CINCINNATI, OHIO.

Ex-President of the American Medical Association; Ex-President of the American Association of Obstetricians and Gynecologists; Ex-Secretary-General of First Pan-American Medical Congress; Gynecologist to the Cincinnati Hospital, etc., etc.

(Abstract from *Gaillard's Medical Journal*, January, 1899.)

How are we to establish the relationship of cause and effect between pelvic diseases and constitutional states? The chronologic element of the histories is suggestive to say the least, the pelvic disease occurring in the majority of all instances as the initial departure from health. The succession of events, from this point, is generally easily traced; but, if they were not, a reasonable interpretation of known physiological and pathological laws, would enable us logically to trace the connection. The constitutional disturbances incident to puberty, to the menopause, and for that matter to sexual excitement, are but so many examples of nerve perturbation, with a tendency to nerve exhaustion. Of course in ordinary and physiological instances, they are within the normal limits, but still the resemblance to the morbid phenomena of neurasthenia is so striking that the differences are of degree rather than of kind. In each instance there is a local cause for the change—the evolutions of puberty, the involutions of the menopause, and the local congestions incident to sexual excitement. If it be true that on the physiologic side local pelvic conditions thus modify constitutional states, it must be true, on the pathologic side, that equally pronounced pelvic conditions produce equally pronounced constitutional states. The variation of effect is equal only to the

variation of cause, the concomitant circumstances being the same. But let us pass from the general to the concrete. Take the case of accidental pain—a traumatism, if you please, and note the phenomena. There is disturbance of the cardiac and respiratory rhythm, the superficial capillaries become contracted, there is more or less pronounced prostration, and the whole is followed by the excretion of an excess of uric acid. This latter circumstance indicates that there has been an abnormal increase of waste in the process of metabolism. Now let us change the picture. Instead of the victim of an accident or an injury, take one of these women whom I have presented to you, and for the sake of the argument, leave out of consideration for the present the elements of infection, of work and of worry. A painful condition, and a constant painful condition, at that, has been established in the pelvis. This is always true in cases of retro-displacement of the womb with fixation, in occlusive inflammations of the Fallopian tubes, in follicular degeneration and inflammatory fixations of the ovaries, in intestinal hyperplasias of the uterus, and in many other conditions. Now what must be the result of these painful states in their influence through the rich nerve connections, of which I have already spoken, upon the general system? Obviously there must be a repetition in kind, if not in degree, of the results of the traumatism, with the difference, however, that the traumatism was transient, while the pelvic state is persistent. The metabolic changes induced temporarily by the injury are induced constantly by the diseased organs. The resulting influence upon metabolism is marked. The observations in my service in this Hospital indicate that in practically all of these cases the proportion of the uric acid is increased to one in forty, one in thirty-six, and, in one instance, to more than one in thirty. The daily amount of urine in these cases is below the average, and, of course, the specific gravity is uniformly high. Occasionally we find albumen, but generally without other evidence of renal lesion.

At this point begins the multiplication of difficulties. The lithæmic condition becomes exaggerated. The poisons of the uric acid group increase apace, within the circulation, with the result of still further lowering the tone of the nervous system. This is noticeable especially in the sympathetic and finds expression in retarded peristalsis and consequent impairment of digestion, both gastric and intestinal. Constipation ensues, and when constipation begins, then begins auto-intoxication, due to the absorption of stercoreine, as discovered and demonstrated by Flint, and of other salts found in the feces. It were useless for me in this lecture to try to trace the hydra-manifestations of neurasthenia. From the point at which we have now arrived in our discussion, it is but a step to any of the neurasthenic possibilities. My purpose will have been accomplished when I shall have fixed in your minds the fact that these intra-pelvic states are among the most potent factors in the causation of neurasthenia. The pathology of this disease is far from complete when these states are not taken into account; and yet, self-evident as is the proposition, certain neurologists, notably Dana, in a recent encyclopedic article, fail to give it recognition. It is for this reason that I call your attention to it with the greater emphasis.

And now, lest I be misunderstood, let me hasten to be explicit in the declaration that this is not the only cause of these nervous phenomena; it is only one of many; work, exposure, food too rich or too poor, dissipation, injuries, acute diseases, excessive fecundity, sexual indiscretions and worry, are all potent causes. Then, on the other hand, there must be recognized what a lamented writer on this subject once called "nerve counterfeits" of uterine and ovarian disease—cases in which the patient's complaints all center around her genitalia, the various organs of which present no manifestations of disease. These cases are to be carefully differentiated and are to be treated in accordance with their respective indications.

CONSTITUTIONAL TREATMENT.

Now while the rational inauguration of treatment must be by giving attention to the cause, it must be remembered that in practically all of these cases we have certain consequences, certain acquired constitutional states, with which to contend. These states are easily summarized in the general expression—uric acid diathesis, and consist, essentially, in the retention in the system of the products of metabolism. Uric acid, urea, xanthine and paraxanthine are among the chief factors of mischief. If to these you add the toxic products absorbed from

the always sluggish bowels you can realize how thoroughly poisoned is the system. We are generally confronted by this state of auto-infection, not in the form of a developing process, but in a form that our French friends would call a *fait accompli*. It is essential in all of these cases, either before or after any surgical interference that may be required, to neutralize these poisons and eliminate them from the system. In this connection you must select your remedies wisely if you would realize the best results. The salicylates are anti-lithæmics having a certain value, but unhappily they upset the digestion. Lithia is chemically and physiologically the logical remedy in these cases, but as ordinarily obtained is worthless because besides its tendency to hyperalkalize the stomach it is rarely assimilated by the system in quantity sufficient to produce desired results. The lithia waters which abound in the markets, unfortunately do not abound in lithia to the degree that gives them a therapeutic value beyond that which depends upon the water itself rather than upon anything it contains. I therefore do not prescribe them except as a sometimes necessary pretext to get my patient to drink water in abundance and as this is a very expensive proceeding, I generally order some pure spring water, or, what is just as good, some distilled water, and put what I desire into it. It is always desirable to give your patient a laxative, and to avoid the multiplication of potions, it is well to combine it with your other agents, whether they be the salicylates or lithia. For the last few months I have been using a remedy that presents a happy combination of these qualities—a new salt of lithia known as thialion—but why so called I am sure I do not know, but I do know that with it I have been able to lessen the acidity and lower the specific gravity of the urine more rapidly than by any other means. I use it by giving a teaspoonful in hot water before meals. In the course of thirty-six to forty-eight hours, its gently laxative effect is realized. From this time on I give it less frequently. By the end of the next day the systemic effect is manifested. I am rather fond of giving a full dose of it before retiring—an innovation, I believe, in the manner of using it, but I have been able easily to thus perpetuate its once established effects by a minimum of both drug and dosage. The bowels are put into a condition of normal activity.

Certain of these cases are anæmic, and require a reconstructor. As a rule they are intolerant of iron, which generally adds to the mischief by interfering with digestion and intensifying the pre-existing constipation. I have been able to increase the haemoglobin and reduce the usual leucocytosis of these cases most effectively by employing the formula of my old friend Dr. Barclay for the administration of gold in combination with arsenic, a product now obtainable under the title of arsenauro. A diet from which dark meats are excluded should be enjoined. Active muscular exercise out of doors should be indulged in consistently with the strength of the patient. Daily baths, but never cold ones, should be made a matter of routine. An occasional sudorific bath is an advantage. When a patient cannot take active muscular exercise, out of doors, she should be treated by being given passive exercise in the form of massage.

CONSTITUTIONAL TREATMENT IN JOINT INJURIES.

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(Abstract from the *New York Lancet*, January, 1901.)

Age, diathesis and constitutional conditions make their impress felt in a multiplicity of injuries. It is constantly observed in neurasthenic hysterical females; after articular traumas; and in gouty, or rheumatic states of the system in both sexes. Indeed Brodi, went so far as to allege, that a rheumatic arthritis may be provoked in various individuals by severe strains. When acute, inflammatory changes, with marked swelling and intense pain, follow a violent wrench of an articulation, there is often an absence of any definite clinical symptoms, by which we can differentiate between those resulting from local causes, or systemic conditions. We may search in vain in the clinical history for any evidence of latent rheuma-

tism; an excess of phosphates is absent in the urine, and the diurnal fluctuations are wanting in temperature.

In malarial countries, and in places where it appears in its undeveloped forms, malarial infection by its deleterious effects on metabolism, and the nutrition of the system, is well known to exercise a most potent influence in masking symptoms and retarding the repair of injuries. The presence of the plasmodie, it is true, would decide diagnosis; but, few are capable of preparing the blood, and making a critical study of it under a high-power objective; moreover, in the undeveloped types of malaria, it may be absent or detected with difficulty. Syphilis, rather strange to say, is one of the constitutional affections which rarely complicate diagnosis of the joint-injury, though it often retards reparative processes. The same may be said of tuberculosis. When, therefore, we meet with severe arthritis, after joint-injury, and this fails to respond to ordinary therapeutic measures, we should carefully investigate into the environment of the patient, his habits, his antecedent history, and examine well into his general condition.

In the middle state, where ill-defined malaria is so common, when especially a febrile element is present, a brisk mercurial purge followed by a full dose of quinine, will often shew a most gratifying change in the local condition. In those cases, attended with grinding, torturing nocturnal pains, we may suspect a gonorrhœal metastasis. But the most common complication is rheumatic. How shall we determine this? Certainly not by any *ensemble* of symptoms, as the only one ever constant is pain with local swelling. We must then resort to the *therapeutic test*; in other words, treat the patient as well as his injury.

As a local application, salicylic acid, in the following combination, is a power in any painful affections of a joint from any cause, in which inflammation is present:

- B. Acid salicylic, 3 ij.
- Tinct. opii, 3 iss.
- Ol. terebinthinae, 3 j.
- Ol. dulcis, 3 ij.
- Spir. vini rect. U. S. P., q. s. ad 3 vj.

M. Sig. Liniment.

In order, however, to reach the system, and eradicate the cause, when rheumatism is present, internal medicine should be simultaneously given in all cases. The potash salts, with colchicum, may be used to advantage but of late in all these cases, I have used lithia in the form of the new salt, thialion, which acts with energy and remarkable effect. I first commence with a full dose of two teaspoonsfuls of thialion in orangeade, or what is better some of the syrup, and carbonated water. This will freely evacuate the bowels, when as a rule amelioration is felt. The dose is then reduced to a half teaspoonful one hour before, or one hour after each meal, dissolved in a cup of hot water and drunk as hot as possible. We will need no other medicine to keep the bowels in a soluble condition, because thialion effects this perfectly, acting freely upon the liver.

When gonorrhœal complication is expected, nothing will afford as prompt relief as free acupuncture with hot bathing, combined with the internal treatment above mentioned.

PURULENT, TUBERCULAR AND RHEUMATIC HIP-JOINT DISEASE.

BY A. M. PHELPS, M. D., NEW YORK.

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(Abstract from the *Peoria Medical Journal*, December, 1896.)

In this brief paper, the author desires to call the attention of the profession to a few points in the etiology, pathology, symptoms and treatment of joint diseases of a tubercular, purulent or rheumatic character: the former two, he believes, being by far the most common.

He states that *tubercular* joints may be distinguished from the others at the outset, from the fact that they begin insidiously, progress slowly and cover over periods of months or even

years, resulting in the formation of tubercular abscesses or extensive destruction of bone by caries. Purulent joints, on the other hand, are characterized by the sudden onset of the disease and great pain. As the disease progresses so rapidly and virulently, the destruction of bone extension and the formation of abscess follow very soon after the attack. Both of the foregoing joint affections, he believes, are distinguished from those of a *rheumatic* character, in that a single joint is usually attacked; whereas in joint disease due to rheumatic condition several joints are affected at once. From this we may safely conclude that single joint disease is almost invariably tubercular or purulent, and that these two latter conditions are always local and have nothing to do whatever with a general constitutional disease. Whereas several joints are usually diseased when caused by constitutional conditions such as syphilis and rheumatism.

Of purulent and tubercular diseases, especially when affecting the hip-joint, the author considers the *treatment*, under two heads, operative and mechanical. Of the former he says:

"*In all cases where abscesses are present they should be immediately evacuated. This enables the surgeon to intelligently explore the diseased joint with his finger and ascertain to what extent the disease has progressed.* If the head of the bone is separated from the neck, it should be removed, together with the great trochanter and the neck. The acetabulum, if diseased should be thoroughly curetted, together with any other diseased tissue that may be found in the joint. If only small points of disease are found within the joint, those should be curetted together with whatever diseased tissue exists within the joint, and the cavity washed out with bichloride solution, 1 to 2,000. The joints should now be filled with a solution of iodoform and glycerine, one-half ounce of iodoform to four of hot glycerine. After this has been done the patient should be put in bed, with extension in the line of deformity and lateral traction above the knee, amounting to about three pounds. Day by day the limb should be lowered until the deformity is overcome. When the deformity is overcome the lateral traction fixation splint which he devised and uses in the Post-Graduate School should be adjusted, and the patient put on crutches with a high shoe on the well leg. Pus and tubercular material destroy living tissues, and when joints are allowed to macerate for weeks and months in these materials, which now seems to be the favorite method of many of our orthopaedic surgeons, extensive destruction of bone will almost surely follow from infection. In many cases extensive cutting of muscles, tendons and fascia may be necessary to overcome the deformity. The reader will see then that we believe that deformities should be first overcome and all abscesses opened before the mechanical work begins. *No case of hip-joint disease need recover with angular deformity,* and to secure and attain this end steps should be taken at the commencement of treatment to place the limb parallel, after which the lateral fixation splint, already alluded to, will prevent the patient from becoming again deformed. * * * "In the Post-Graduate Hospital School, we fix our cases of hip-joints from one to five years *without motion*, with the lateral fixation splint, and in our long series of cases not one has resulted in bony ankylosis, excepting cases with great destruction of bone; and where we have had control of the patients, they have recovered, practically, without angular deformity. In fractures of the elbow-joint the patients were fixed in plaster of Paris for many weeks, without passive motion."

The author now states that, inasmuch as *rheumatic joints* are always due to a constitutional condition, they require (in addition to the mechanical and operative) constitutional treatment. He believes, however, that the mechanical treatment in rheumatic joints, is of just as much importance as in tubercular and purulent joints. In the old man or woman with a rheumatic diathesis is frequently seen a diseased hip, unquestionably rheumatic. Such cases should immediately be put into bed with weight and pulley varying from twelve to twenty pounds, after which follow the methods employed in tubercular and purulent joints. Concerning the constitutional treatment, the author says:

"In all rheumatic cases the alkaline treatment is prescribed. During the past year, in all cases of rheumatic joints, I have been using a new salt of lithia, combined with alkalies, known as thialion. This is a laxative salt, and when used carefully and faithfully, has proved in my hands one of the best agents in these rheumatic affections.

My method of administration is as follows. I direct that a teaspoonful of this granulated salt be dissolved in a cup of hot water and drunk as warm as possible (in acute cases) taken every three hours until very free catharsis is produced.

This is accomplished by thialion acting very freely on the liver, producing a marked flow of bile into the intestines, as well as increasing the peristaltic action of the bowels.

After this result is produced the dose is then lessened to once or twice a day until the urine approaches the point of alkalinity, which generally takes place about the third day, then once a day only until cure is effected.

In chronic cases a teaspoonful taken in the same medium morning and night, always before meals for a week and then once a day on rising, for a week longer, produces the happiest results."

CONSTIPATION IN TUBERCULOSIS.

BY WILLIAM PORTER, A. M., M. D., ST. LOUIS, MO.

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(Extract from a Special Lecture in the 1899 Course on Physical Diagnosis at the College of Physicians and Surgeons, St. Louis.)

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In the care of tubercular cases, there is one point that should always be insisted upon, and that is that the lower bowel should never be allowed to become distended with fecal matter and partially digested particles of food debris. I can conceive of no better condition for the retention and development of bacilli than that which exists in a bowel so distended, the muscular fibres of which are weakened by distention, and the mucous membrane congested by the irritating substances retained.

In nearly all such cases of any chronicity, there is dilatation of the ascending and transverse colon, and dullness on percussion of the descending colon. The explanation is simple. Accumulation in the lower bowel, with fermentation and retention of gas in the transverse and ascending tracts. Aside from the usual idiopathic sequelae of constipation, there is the additional danger in tuberculosis of auto-infection from the bowels. I do not believe that we attach enough of importance to this, and yet the reasoning is logical from premise to conclusion.

The patient who is constantly expectorating tubercular matter will certainly receive more or less of it into the stomach, especially in the acts of drinking and food deglutition. The weak gastric digestion, so often present, does not greatly change the activity of the bacilli or the virulence of their ptomaines. These pass into the very tract where absorption is one of the main functions. Is it, then, an unreasonable proposition that much of the general mal-condition in tuberculosis depends upon this manner of auto-infection?

In these days when the subject of limitation of tuberculosis by sanitation is attracting so much attention it is but natural that our investigations should largely be in the direction of prevention of all outward sources of infection. It is right that the sputum should be mixed with germicides or burned. It is right that the milk and meat should be the objects of careful scrutiny. It is right that the individual should be protected against all danger of germ invasion from those who are already so affected, but it is also right that he should be protected against himself.

Were it not for auto-infection I am convinced that most cases of tuberculosis would be more amenable to treatment. We can all recall cases in which a recognized tubercular condition was for a long time latent. Seeming improvement began. There was a gain in flesh, in strength, in appetite and in courage. Then an explosion occurred. The afternoon fever, night sweats, loss of appetite, irregular action of the bowels, all appeared, and yet no tangible

extension of the local pulmonary lesion. Does this not suggest auto-infection? The very fact that impaired assimilation is so early a complication in tuberculosis, is a fact that adds to the plausibility of this hypothesis.

Indeed this deduction has come to be more than an hypothesis, it has all the authority of a recognized fact. The physician who neglects this part of the treatment and permits the lower bowel to become a receptacle for the retention, increase and absorption of material containing so much active poison as the tubercular sputum—that physician must not be surprised if, in spite of his efforts in other directions, his patient steadily declines.

I cannot but think that some of the good results credited to creasote, guaiacol and other remedies of this class, are due to their immediate action in the intestinal tract, either as germicides or in rendering the condition of the intestine uninhabitable for the bacillus and in counteracting the influence of the ptomaines. It has now become my practice to order a high enema once or twice a week so that the lower bowel may be well emptied and kept in as aseptic a condition as possible.

The same inertness may, and I believe does, prevail in the small intestine, notably just above the appendix and in some cases through much of the extent of the whole lower bowel. Here no enema can reach and yet a frequent evacuation is necessary, if the above noted conditions are present. Drugs that irritate, or have a marked drastic action are to be avoided. It has been the custom of many to give strychnia, aloin, etc., and yet it is manifestly wrong that a stimulant and whip, even when guarded by belladonna, should be used to urge to activity and compel action of muscular fibres already exhausted and weakened by distension.

It is much more rational, I take it, to give a mild saline after the lower bowel has been well emptied by the enema. For some time the phosphate of soda has been my favorite remedy, but it does not meet all of the indications, especially where there is the complication of lithæmia, or urine with excess of phosphates, as often found in tubercular cases. Moreover it has been my experience that this agent loses its effect after a short time unless the dose is increased repeatedly.

More recently I have used, with satisfaction, thialion, which combines the properties of a laxative salt with those of lithia. It has the additional virtue of acting upon the uric acid diathesis, which so frequently hinders the recuperative progress and is so often a complication of faulty intestinal digestion.

Thialion performs a four-fold function, all of which tend to help the patient. First, it acts thoroughly on the bowels, increasing peristalsis; second, it relieves the torpid condition of the liver, increasing the flow of bile; third, it acts on the kidneys, increasing the quantity of urine voided; and fourth, it eliminates the uric acid from the body. I give a teaspoonful dissolved in a cup of hot water and drunk as hot as possible the last thing before retiring at night.

Since paying more attention to this phase of the treatment in tubercular cases, I have been able to largely reduce the amount of creosote indicated, and in many cases the reduction of temperature has been very noticeable, following the administration of enemas and the saline. Why not?

It must be remembered, however, that this treatment is not to be pushed too far. Frequent examinations of the abdomen by palpation and percussion should be made and the treatment regulated accordingly. The thialion salt should be given in small doses, well diluted in hot water and after the bowel has been well emptied. I prefer administering it at bed-time. This will not interfere in any way with gastric digestion.

I strongly object to the continued administration of salines, even when well dissolved and largely diluted, in close proximity to a meal in all cases of impaired gastric digestion. I know that experimenters have found in the laboratory, that the exhibition of some of the milder alkalies stimulates the secretion of hydrochloric acid, but it must be remembered that such experiments are generally made upon organs with healthy functions. In cases where the alkalies—bicarbonate of soda, for instance—do produce a better gastric action when given near the time of eating, I believe it is because of its reaction with the lactic and fatty acids.

Much of this I know is in apparently direct opposition to the teachings of the physiologist, and yet there is no real contradiction. Sheridan Lee has shown that in natural gastric digestion, conditions are favorable for the rapid absorption of soluble salts, but we are not dealing with natural gastric conditions. Besides this, whatever of the salt remains unabsorbed, certainly neutralizes to some extent the hydrochloric acid.

This may be a lengthy plea for so seemingly an unimportant proposition, but in caring for these cases nothing is unimportant—certainly nothing affecting digestion. Therefore I repeat that in all tubercular cases where a saline laxative is needed, it is better to give it at bedtime.

It is not by the use of any one agent—serum, creosote, tonics, diet, rest or what you will that we can confidently expect to cure, as we may now do, many cases of tuberculosis formerly considered hopeless, but by a proper application of every method indicated. Of these I am sure the one above discussed is not the least.

URIC ACID TOXÆMIA.

BY ARCH DIXON, SR., M. D., HENDERSON, KY.

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(Reprinted from the *Texas Medical Journal*, September, 1900.)

That "necessity is the mother of invention" is no less true in medicine than in other ways. A distinguished physician living in the East, big of brain and heart, a leader in society work, both literary and social, a "chutmuck," a "friendly Indian," from some cause, upon the discussion of which it is not necessary to enter here, found himself the unwilling victim of increasing uric acid trouble. The attacks gradually became more violent and increased in frequency until life to him became almost a burden. He was compelled to restrict himself in many ways, both in his business and social duties and he had to turn with serious thought to some method of exorcising this demon which had entered into him. How he suffered, only those who have had a similar experience can at all appreciate. I remember once, it was at the Nashville meeting of the American Medical Association; after the business of the day, there was a meeting of the "committees" called together by the chairman of the committee on "Nutrition and Stimulation." Mathews was there and Love and Owen, of blessed memory, and the peerless Palmer, who since "has passed the gates of sorrow through," and McMurtry, Grant and Reed and other royal fellows. There had been a flood of eloquence and an avalanche of wit and the gentleman from the East was much in evidence. An hour later he writhed in agony, the victim of an explosive attack of nephritic colic. Six hours later he was on his way back to the East. His frame of mind was such that he could not exclaim, "This is a very beautiful world and I'm glad I'm living," but the contrary. Returning home, he consulted the best men in the profession, among them his particular friends, Price, Wyeth, McBurney and Marcy. There was no difference of opinion as to his case. Each and every one pronounced it stone in the kidney, for the relief of which an operation must be done. What did that mean? It meant the indefinite relinquishment of a practice already crippled by continued attacks of indisposition, the leaving of home and family, the subjection of himself to the surgeon's knife, with perhaps the result at best, of a long and tedious convalescence. The contemplation of this gave him pause, and he seriously considered if "the game were worth the candle." But something must be done, and quickly, too, for in addition to his kidney trouble, *gout*, that torturing devil, seized upon him. A further description of his condition is unnecessary. And so this man, selfishly if you will, set the machinery of his great brain to work to discover something to cure himself.

It is useless to say that he had tried all remedies known to the profession, holding fast only to those which seemed good. Among all these the lithias gave promise of the best results, and along these lines he began a most active research. Assisted by an able German chemist, a series of experiments were kept up for four long years, until finally a laxative salt of lithia

was evolved, which, after numerous tests, was found to be an active stimulant to all the emunctories, and since gout is rarely, if ever, due to excessive formation of uric acid in the blood, but always to retention, or failure of excretion, the discovery of this remedy came to this man as a life saver and a blessing indeed. Its action upon him he describes as little short of marvelous, transforming him, as it were, into a new man. Not content to form a verdict from its action in his own particular case, he distributed a sufficient quantity for trial in similar cases among his numerous friends in the profession, telling them of the great things it had done for him. The reports from these were awaited with great anxiety, but at last they came and he could well exclaim "Eureka!" for the results upon others were the same as upon himself. Urged by his friends he determined to give to others the benefit of this great blessing which had come to him, following the injunction:

Have you had a blessing shown?
Pass it on.
"Twas not given for you alone—
Pass it on.
Let it travel down the years,
Let it wipe another's tears,
Till in Heaven the deed appears,
Pass it on.

In the spring of 1899 I received several bottles of this lithia salt, now called thialion, with the request that I give it a trial, and if it proved satisfactory to so report. Being a lithiasic myself, and having run the scale of all remedies recommended for this trouble with little benefit, I was extremely skeptical of its efficacy. However, I concluded to use it in a few very obstinate cases, which had refused altogether to yield to other treatment, or had been very slightly benefited thereby. The results obtained were in the nature of a very agreeable surprise. First of all, I cannot do better than give a report of my own case as taken from a paper, "Some Observations on Lithiasis," by my son, Dr. Arch Dixon, Jr., published in the May number of *The Louisville Monthly Journal of Medicine and Surgery*.

"The latter part of August, 1899, Dr. —, who has been in active practice for nearly twenty-five years, was attacked suddenly, after a moderate lunch, with vertigo so decided as to necessitate the recumbent posture, and cause great alarm to his family.

There was no actual syncope, but a distressing sense of faintness, from which, however, he recovered in a few minutes; there was neither nausea nor palpitation, but headache. The attack was at the time attributed to lager beer not very fresh, taken with the lunch. In early life, while a medical student, he had suffered from a bad attack of dyspepsia with palpitation culminating in mitral disease. Occasional attacks of vertigo occurred, but usually late in the evening and after days of unusual fatigue.

These were always temporarily relieved by a small quantity of any mild stimulant. The attacks were at one time thought to be possibly due to his habit of smoking, but no direct relation could ever be traced.

Matters had now assumed so grave an aspect that he began seriously to study his own case as he would have been compelled to do in the case of any other patient. First the condition of the heart was investigated as a possible cause, but competent examination revealed no increase of the mitral disease, no evidence of fatty degeneration, the pulse in fullness, frequency and rhythm normal, neither palpitation nor dyspnoea, only an occasional intermission of the pulse. No evidence whatever of any organic disorder. The renal function was apparently perfect; the urine of proper specific gravity, although there was a tendency to abnormal acidity. In the absence of any deposit or other symptom, the urine was only roughly tested at any time, until a severe attack of lumbago accompanied by general myalgia and intense headache compelled a more accurate examination. The digestion was bad; the bowels as always during life, regular with the exceptions noted hereafter; the urine was found to be loaded with uric acid. These attacks have never been accompanied by fever nor by any severe disturbance of the general health, but always by extreme irritability, nervousness and im-

patience, with more or less torpor of the bowels. The appetite, even in the worst of these, was always good enough if not too good. A more careful course of diet was at once instituted.

The amount of nitrogenous and carbonaceous food was greatly reduced, and all stimulants and malt liquors, always in daily, but never in excessive use were discarded entirely, smoking was interdicted.

As medicines, a full dose of thialion was given before each meal, and an active dose of concentrated French lime water on rising each morning, these producing one full liquid evacuation daily. The effect of this course was very decided. It was continued with hardly an intermission for four months, though on several occasions, when too much animal food, a glass or two of wine or whiskey were indulged in, the warnings were unmistakable. At the end of this period the tinnitus was hardly noticeable, the vertigo entirely gone, and the gouty pains a thing of the past. His health has been more vigorous than ever, but only at the price of constant watchfulness, for any attempt at the indulgence at the table, either at once or with the lapse of two or three days, brings its penalty in myalgic pains, with headache, tinnitus, or vertigo one or all. The only wines that seem to cause no trouble are a thin table sherry and dry champagne."

I make no apology for giving the case at some length, and I consider it to be a good illustration of a certain class of lithæmic cases, and typical of the nervous and gouty complications, while remarkably free from those renal and gastric symptoms which more generally accompany and obscure the diagnosis, for, as will be noticed, there were none of the ordinary symptoms to call attention to what was undoubtedly the true source of the difficulty, the imperfect assimilation of the ingesta. That vertigo and tinnitus as well as other obscure and intractable complaints, especially those of the skin and mucous membranes, may often be traced to the lithuric condition, whether it be designated as lithæmia or suppressed gout, there can be no doubt.

CASE II. Mr. A. J. C., aged 67, farmer, weight 180, was referred to me by another physician. Mr. C. had led an active life, was a good eater, but moderate drinker. For more than two years he had been suffering with lumbago, headache and what he described as "spells," in which he would for the moment lose consciousness. These attacks of vertigo would come on suddenly and without periodicity. He was also much constipated, was low spirited, being convinced that he was the victim of some incurable malady. His digestion was bad, complexion sallow, tongue coated. His urine was scanty. Specific gravity 1.030, reaction strongly acid, with a trace of albumen, dark red, with a large brick dust deposit. Microscopic examination revealed uric acid crystals, in large numbers, with a corresponding deficiency in amorphous urates. He was put upon teaspoonful doses of thialion in a glass of hot water three times daily before meals. He was also instructed as to diet and told to take a hot bath every night just before retiring and to report in a week or ten days. In a week Mr. C. came into my office and reported that he was much better. The same treatment ordered except that the thialion was to be taken only once a day, an hour before breakfast.

In three weeks he came in and said, "Doctor, I am a new man; my friends ask me what I have been doing to myself, I look so much better they hardly know me." Mr. C. is a new man, his aches and ailments have all disappeared and with the exception that he still has an occasional mild attack of vertigo, his health is excellent. I could cite numbers of such cases.

One of the most striking and convincing effects of the virtues of thialion is in the treatment of asthma. There can be no question, as Haig says, that uric acid produces high arterial tension and that the contraction of the arterioles varies directly with the amount that is circulating in the blood. The way then to cure asthma is to cleanse the blood of uric acid and to keep it clean; this thialion will do. Mrs. D., aged 65, had suffered for years with frequent attacks of asthma. She had been under the treatment of several physicians, who had exhausted all the remedies known to pharmacy with but temporary relief, and this being afforded only by morphia hypodermically administered. Her breathing was at all times labored, but during the paroxysms the dyspnoea was painful to see, and sleep was out of the question. Examination of the chest revealed bronchial catarrh and emphysema. The slightest change in atmospheric conditions aggravated all symptoms and she looked forward with dread to those

changes which brought about humidity. She became a regular barometer and the signal service man was not in it with her in foretelling the changes in the weather. Thialion was given her in the usual doses with the addition, now and again, of a teaspoonful of elix. paraldehyde at bed time. It has now been four months since she began the treatment and with the exception of the remaining emphysema she is practically a well woman and is correspondingly grateful.

It is useless to multiply cases. The production of uric acid is an interesting and as yet an unsettled problem. Whether it be by synthesis of the ammonium salts with lactic acid in the liver, or by decomposition of nuclein, or by the kidney synthetizing urea with glycine, the fact remains that it is there and the prime object is to get rid of it. The pains in the muscles and fibrous tissues and even in joints, that often appear after exposure to cold and like influences, though called rheumatic are often not rheumatic at all, but are manifestations of metabolic disturbance and due to alterations in the fluids of the body, in consequence of which certain substances are thrown out of solution and act as irritants, generally or locally. These cases derive no benefit from the salicylates, but are certainly and surely relieved by thialion. Lest we forget, let us remember that all uric acid troubles, and they are legion, are due to disturbed metabolism and lessened excretion, and that complying with certain rules of diet, the best of which are those laid down by Dr. Henry S. Pole, of Hot Springs, Va., and by giving such remedies as increase excretion and restore metabolic equilibrium, and the best of these in so far as my experience goes is thialion, we can restore our patients, if not to perfect health, to that condition in which he may now and again exclaim, "This is a very beautiful world and I'm glad I'm living."

THE TREATMENT OF CONSTIPATION.

A Clinical Lecture Delivered at the Hospital College of Medicine, Louisville, Kentucky.

BY JOSEPH M. MATHEWS, M. D., LL. D., LOUISVILLE, KY.

Professor of Surgery and Clinical Lecturer on Diseases of the Rectum; ex-President of the American Medical Association; President of the Kentucky State Board of Health, etc.

(Reprinted from the *New England Medical Monthly*, November, 1899.)

GENTLEMEN:—During the present session of the school, which is now nearing its close, you have witnessed operations for nearly every known disease of the rectum. I am sure that you are convinced now, if never before, of the absolute necessity of giving some special study to this class of affections. I trust, too, that by this clinical demonstration you will have been profited sufficiently to do many of these operations, thereby relieving a large class of sufferers, a class, too, which has been wonderfully neglected in the past by the profession. You know how common it is for all such affections to be designated as "piles," and the patient to be assured that an ointment will effect a cure. Your experience here will prove to you what an error it is to so classify these troubles. You have seen at these clinics men and women whose lives have been wrecked by the want of proper treatment. Need I mention such formidable diseases of the rectum and colon as tuberculosis, syphilis and cancer, or the so-called minor affections, as hemorrhoids, fistula, proctitis, ulceration, stricture, prolapse, polypoid growths, eczemas, pruritus, etc. Let me beseech you, therefore, not to look too lightly upon this class, but at least give them the benefit of a careful examination before you dismiss them. As the last clinic to be held this session I have summoned a number of patients who are not seriously ill, nor do they need any surgical operation. You see here some aged and some middle aged, while here to my right is a very young person. Each one of these is a subject of that very common, and, what is generally regarded, very simple ailment—*constipation*. Before I begin to explain the condition of these patients, or this class of patients, permit me to say that constipation is a relative term. What is constipation to one is not constipation to another. Very often you will hear a person say, "If my bowels do not move every day I feel badly, headache, languor and tired." Another in apparent good health, will inform you that his or her bowels

move only on every second, third or fourth day. The late Dr. D. W. Yandell once told me that a patient, in describing her trouble, said that so far as her bowels were concerned she was all right, as they moved with perfect regularity, *every two weeks*. I have made mention to you of a case treated by me and which is fully described in my work on Diseases of the Rectum, a young lady whose bowels moved only once every three months, four times a year.

I do not wish you to be impressed with the idea, either, that constipation is a simple thing, for to the contrary, it is often a very serious affair. I once heard an old physician say that "if his bowels moved in the morning he was sure he would not die that day." As he is now dead I have wondered "if his bowels moved that day."

Let us for a little time consider the physiology of defecation. The faecal mass has the cæcum as its starting point, and when "a call of nature" takes place it means that a peristaltic wave occurs, which moves this mass rapidly through the colon, dropping it into the sigmoid flexure, thence into the rectum. If the "call" is heeded by the individual an "action" is the result. If, through false modesty, attention to business, or general laziness, attention is not paid to this effort of nature, then the watery constituent, which is the greater, is absorbed and carried into the circulation. In consequence we have an *auto-infection* which may prove of serious import. You can readily understand that by the absorption of the faecal mass, a poison, that the whole general system would be deranged. The red corpuscles of the blood are diseased, altered in color and lessened in power. Hence a sallow complexion, dark rings under the eyes, cold extremities because of less supply of oxygen; lethargy due to vivified blood and enfeebled corpuscles. The system is not nourished, hence the loss of flesh; the diseased blood circulates through the nervous system, and there is in consequence nervous depression—we might say *nervous exhaustion*—the pulse is slow and easily compressed; the organs of digestion and assimilation are lowered; there is loss of memory, no concentration of thought, and a great disposition to drowsiness. Notwithstanding that these patients are generally "sleepy," they are not relieved by sleep. All the functions are unsatisfactorily performed. If this condition is not relieved, disease and suffering must be the result. There is another phase of constipation that I would have you consider. We have stated that the liquid contents of the faecal mass is absorbed, the solid portion remains in the flexure and rectum. Daily and weekly this dried mass is added to, and in consequence we have the whole pelvic circulation deranged; external piles are produced, internal piles are made to bleed; atony of the coats of the bowel takes place, congestion, inflammation, and ulceration may result. Truly, then, constipation is no "light" matter. What, then, shall we do for this condition? I once heard a doctor say that he would give a thousand dollars for a "specific" for constipation. I really believe the investment would have been a good one, when we consider how many people are thus affected.

Before attempting to map out any line of treatment I wish to impress upon you that you should diagnosticate between what is known as *obstipation* and *constipation*. The former may arise from a mechanical cause, as an irritable and contracted sphincter, a stricture or growth in the rectum, and some believe that the valves of the rectum play a part here. Of course, if either of these conditions are detected you should turn your attention to their removal, for the obstipation is only secondary to them. I have relieved many cases of so-called constipation by dilating the sphincter muscle. But what should be done in a medical way to eradicate this condition? Let me say that you will find as most excellent adjuvants in the treatments of many of these patients: electricity, massage of the abdomen, cold baths and exercise. Every physician seems to have some favorite prescription, in the form of a pill or solution, but they are constantly informed that "they have lost their power." Of course you have heard that the "regular habit" should be indulged in; that enemas are good under certain conditions, and a pill is necessary. But do such effect a cure? Very rarely. Each case must be studied as an individual one. Fat people as well as the lean are affected in this way—the young as well as the old. Women are more given to the habit than men, and I believe the reason to be that they are possessed of a womb. You will often find that a displaced uterus, or an enlarged one with adhesions, is responsible for the constipated condition. It is common with young school girls, who in the rush to get early to school neglect the very

important duty of having their bowels move in the early morning. Among the serviceable drugs in the treatment of this affection you will find the following: cascara sagrada, sulphur, belladonna, nux vomica, sulph. iron, buckthorn, ipecac, magnesia, the mineral waters, and many others, either alone or in combination.

But let me impress upon you the necessity of making a more thorough study of such a case. If the patient who consults you is really desirous of getting well he should at least give you a fair chance to cure him. Supposing then that you have such consent, I would advise you to proceed in the following way. First try and ascertain what is the cause of the constitution. In this connection, I wish to state that after an examination and observation of these cases extending over twenty years, I am forced to believe that a majority of them have as a basis a constitutional derangement. In trying to solve the problem, it was observed that many of these patients were of a rheumatic or gouty diathesis. Acting upon this hypothesis, I have treated them by combating this special trouble and have found that in many cases the constipation would take care of itself. There are many preparations that you can use for this purpose, but the best is some form of lithia. Waters containing this salt will be of service if taken in large quantities and for a long period of time. However, in my own practice I prefer to use the drug in a more concentrated form. I have, therefore, been using for some time a preparation of lithia known as thialion, with a marked degree of success. I direct that it be taken in teaspoonful doses, given in a full glass of hot water before each meal. My theory is that in the rheumatic or gouty subject the intestines are brought under the same conditions that the disease or diseases are made manifest in other portions of the body. The muscular coat of the intestines is particularly affected by this gouty condition, and in consequence loses its contractile power. Anyway I have cured patients of the chronic constipation habit by this drug alone. To proceed, I would say to the patient that you must submit to my directions. You will find that in lieu of the rectal enema, that if a high enema is given through a Wales bougie say of a half to a gallon of water two or three times a week it will be much more satisfactory. The object is to replace the amount of water which has been lost by absorption of the feces. A fruit diet, together with the drinking of large quantities of water, should be enjoined. Massage of the abdomen by the patient himself, he should be taught the route of the colons, should be advised. The sweets should be forbidden and only plain, nutritious diet observed. I consider the administration of drastic purgatives harmful rather than beneficial. If you will watch this class of patients as carefully as you would any other chronic one, you will be awarded by success. I beseech you not to get into the habit of prescribing for them in a routine way, for if you do they will soon desert you, and go elsewhere; besides you will do them no good.

OFFICIAL REPORT OF ST. LOUIS MEDICAL SOCIETY PROCEEDINGS

BY I. N. LOVE, M. D., ST. LOUIS, MO.

(Abstract from the *Medical Mirror*, St. Louis, Mo., May, 1899.)

Prof. I. N. Love, in discussing the papers of Drs. Henry H. Mudd and N. B. Carson, on the Surgical Treatment of Trifacial Neuralgia, with Reports of Cases of Removal of the Gasserian Ganglion, in the St. Louis Medical Society, Friday, March 17, 1899, said:

"I was rather in hopes that some one else would speak first on this subject. I did not see the papers, but am somewhat familiar with some of the published reports, and from the ones I have read I am satisfied that the operation is a difficult one. Of course I know that the cases reported before the Society by Drs. Carson and Mudd it is to be taken for granted that every other method for the relief of the neuralgia had been exhausted before the operation was resorted to; it is furthermore admitted that these gentlemen are masters not only of the technique of the work, but also in the making of a diagnosis of the proper conditions for the surgical procedure. But I do feel with regard to this operation as I do with regard to many that are reported in the medical press by the masters in the various departments of work, that a large number who read the reports of these cases may, by not having had

impressed upon them sufficiently the importance of exhausting every other remedy, every other procedure, be led to perform this operation unnecessarily. And I have been impressed by this particularly because I have had under my observation during the past five or six years a number of cases which seemed absolutely unreliable—facial neuralgia, sciatica, brachial and other neuralgias, where nerve stretching, section of the nerve, removal of the ganglion, etc., were seriously discussed, and yet where, after the application of proper medicine and adoption of a proper regime as to diet, etc., relief was secured.

I remember one case of facial neuralgia in particular in a gentleman who had suffered for weeks and months; he was 70 years old. There was certainly pronounced evidence that there was some definite lesions affecting the nerve—enough to justify an operation. I suggested gout to that gentleman; he laughed at me and said: "Doctor, I was bankrupted twenty years ago, and have not had enough to eat since that time to give anyone the gout." I told him that high living alone did not produce gout, but that there was a disturbance of nutrition, the checking of elimination and accumulation of poisons—the ashes of combustion and cinders in one's system. I treated him as for gout, gave him salicylate of soda with colchicum, together with occasional sweats by the hot pack. Within a week he was cured without section of the nerve. This was ten years ago; he is now nearly 80 years old. At that time I advised lots of exercise, believing it to be at all times advantageous in the treatment of gout. I believe exercise favors elimination better than anything we can advise. The old gentleman soon established himself in the occupation of collecting stamps from the various business firms of the city, who secured them through the mails in payment for small packages; he then sells them again at a small profit. It was a new business to me. The old gentleman has been doing this for ten years, making a living for himself and other dependents in this way. He walks from ten to fifteen miles a day, and has done so during all that time. Now, mind you, I had treated him previous to this for neuralgia with quinine, salicylates and everything else. I think about six months ago he had his first bona fide attack of gout; that is, judging from his own standpoint and the average layman's standpoint; namely, he had gouty inflammation of the large joint of the big toe, and I treated this in the same way that I have been treating my cases of neuralgia recently, giving teaspoonful doses of thialion in a glass of hot water every two hours, with a glass of plain hot water every hour. Of course this produced free catharsis. After this result was obtained a teaspoonful in a glass of hot water every morning; free purgation and urination completely eliminates the uric acid. In addition, I had the inflamed joint constantly poulticed with cloths wet in boiling hot water day and night. Within three or four days he was able to go about and attend to his business and within a week walking as much as usual. He has had no return since.

The point I wish to make in relation to my personal experience, this case and many others that I could relate, is that we should keep in mind the possibility of an inflammation being of a gouty origin. I think that possibly gout attacks important superficial nerve trunks even more frequently than it does the joints. The personal experience of my friend, Dr. Hunter Maguire, with his own case of gout, recently published, was very interesting reading to me. I shall be able to present it to this Society with other matter relative on a later occasion. I have very strong views on the subject of gout; I believe it covers a broader field than we have previously believed; certainly a much broader field than was dreamed of in my philosophy for my first fifteen or twenty years of active practice of medicine.

During the past year I have kept myself absolutely free from twinges of gout in joints and promptly cured (more promptly than ever before my threatened or matured attack of neuralgia, which I insist are but one of the protean forms of gout) by several doses daily of thialion, a teaspoonful in a glass of hot water, this being a laxative salt of lithia.

URICACIDÆMIA.

BY L. H. WATSON, M. D., CHICAGO, ILL.

(Abstract from the *New England Medical Monthly*, July, 1898.)

"Although the existence of any abundant deposit in the urine, of urates, does not warrant the inference that uric acid is excreted in excess, there is no doubt that there are certain processes going on in the system, the chief evidence of which is such an increase in the elimination of uric acid and through this of urates, that we can establish the condition:" says Von Jaksch.

In the headache of uric acid, there is often a large increase of these urates, accompanied by slow pulse and high arterial tension. This is due to the blocking up of the capillaries. Neither food selections nor exercise will now avail, and we must use drugs. Among these solvents of uric acid, thialion, a new lithia salt, is one of the best. In selecting uric acid solvents, we consider chiefly those which make rapid combination and are readily run off with the water from the kidneys, says Kunze. Thialion seems an ideal preparation in this respect, and a careful trial has compelled my admiration for a pharmaceutical preparation combining so many virtues and so few faults.

CASE 1. Mr. L., 32 years of age, a traveling man, large eater of rich food, has been troubled for many years with muscular pain, indigestion and supposed sciatica. He has been treated by many physicians, and only after taking two bottles of thialion would he admit any benefit. He has now been under observation two months and declares that he has not felt so well in years. Of course a somewhat restrictive diet was maintained; but this had been tried before, to the degree of starvation and no relief.

CASE 2. Mrs. L., married lady, 54 years of age. Has frequent attacks of uric acid gravel, traces of albumin in urine, indigestion, uric gas eructations, stomach dilations and insomnia. Washed out stomach daily and gave thialion. Uric acid copiously deposited, eight grains daily for a week or ten days. Uric excretions one to two grains daily. Insomnia no longer present, indigestion apparently much better, and rheumatism which is hereditary, and from which one son also suffers, is much more bearable. Will continue its use in hot water, mornings, for two weeks more.

CASE 3. Mr. T., young man aged 22, telegraph operator; has suffered from uric acid headache, and intestinal pains for two years; supposed in Louisville to have had gastritis. Has really little or no indigestion. After test meal, hydrochloric and lactic acids were normal in quantity with some undigested starch granules. He complains of frequent pains, first in stomach, then liver, then intestines. Two bottles of thialion relieved all symptoms, and with free urinary secretions, pains all disappeared and have not returned.

The best time for administering thialion seems to be in the morning on a fasting stomach; and, when the alkaline tide is established, relief usually comes.

SOME PROBLEMS SOLVED.

BY R. W. LOWE, M. D., RIDGEFIELD, CONN.

(Reprinted from the *Texas Medical Journal*, for August, 1898.)

Problems are constantly presenting themselves to the busy practitioner, for solution. Some are knotty and difficult of solving so as to be acceptable to himself and to the profession, render a cure possible, and the result satisfactory to the patient. Those of diagnosis come first and of treatment afterwards.

The doctor's means of existence, the necessities for himself and family depend on the skill with which he shall relieve suffering and cure disease. If he does this fairly well, a living, at least, is for him, possibly a competency and if brilliant, wealth. These problems present themselves to all classes of practitioners, the country and city alike, as well as the rich and the poor, the talented and the ordinary.

After a considerable experience in the practice of my profession, and coming in contact socially and professionally with many of its brightest lights, I am forced to confess that they all have these problems to solve, to accomplish which they have quite as much difficulty as

their more modest neighbor, the country doctor, with honors quite easy as to possible errors of judgment. It is a good thing that we do not any of us know it all, for it is just such problems that stimulate us to higher endeavor and make honorable competition possible—something to work for besides the constant struggle for the almighty dollar.

The following case, which indirectly led to the treatment adopted in the other two, was just such a problem; to solve which, necessitated a considerable amount of study on my part, and the solution when arrived at, so impressed me that I considered it a duty to have it published, for the lesson learned may tend to throw light upon some case which now rests in obscurity.

Mr. M., a banker, American, 66 years old, married, a man of family, consulted me on the 6th day of March, 1898, and I obtained from him the following facts: His family history was excellent, both parents dying at a good old age, the father at 77, and the mother at 83. He had one brother and two sisters, all married, who had raised families and were still living. He was born in the country, educated there and entered the office of a small private banking house in a neighboring city at the age of 22. His habits were exemplary; was a member of the church and Sunday school; never drank except in the most moderate way and at the table socially. Never drank in his life to excess. He did not smoke and a very careful examination failed to reveal any specific lesion or history. He had married at 26 a lovely woman, who bore him three healthy children and who made his home an exceptionally happy one. At the time of his marriage he moved to New York City and was engaged in a large banking house of which he ultimately became the head. He was wrapped up in his business and the accumulation of wealth, while outside of this he cared for little besides his family, of whom he was inordinately fond. His habits were sedentary, taking but little of that exercise out of doors which is so essential to health.

He was five feet, nine inches tall and weighed 180 pounds, not what you might call a fat man, but one simply showing good keeping. His appetite was always good, preferring plain food and cooking, meat forming a large part of his diet. At the age of thirty-six he commenced to have attacks of headache which lasted from that time till now, a matter of thirty years. These headaches were of a peculiar character.

The afternoon before the attack would come on he would be restless and uneasy, no pain, no indigestion, but a simple nervousness, a cloud would rise on the horizon betokening (as he often said) the coming of the headache storm of the next day. The pain would commence at the back of the head at the base of the brain, gradually increasing till the whole organ was one aching, throbbing mass. The sight was dim, conjunctiva congested, but the pupils showed no change.

Finally he was compelled to go to bed, there to remain for a day at least and many times two. When he left it, he looked as if he had been through a fit of sickness. Of course it is not necessary for me to say that with his means he could and did employ the best medical talent, in fact both at home and abroad, he had the best that could be procured. He was medicined, shocked, douched, sprayed, physicked, injected and purged, anodyned and narcotized till, as he said, "it was no use," he had simply to live with it till he died or it killed him. These attacks at first came on about once a month, but as he grew older, they increased in frequency till at the time of my visit, they came on once in about four days.

I was called to see him during an attack, at about ten o'clock in the morning of the day in question. The room was darkened, perfect quiet pervaded the house from top to bottom, the servants going about on tip-toe. In fact everything tended to show that severe illness was present.

I found a slight rise of temperature of about one-half of a degree. The tongue, while not coated, was white and flabby, indicating an impaired digestion. His pulse was slightly accelerated, 88. He lay with his knees drawn up and perfectly quiet. The lines of his face were drawn sharply, showing how intense his suffering was. His wife informed me that twice during these attacks lately he had had a mild delirium.

On questioning him about the condition of his bowels, he said that they were very regular and had moved the evening before. While the movements had been regular, he said that he

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had not for years felt the relief he should have done after a normal passage. He insisted that I should give him something simply to relieve the pain, nothing else in fact. I was informed by him that I need not ask him questions, I was not called in for that. Simply relieve the pain by a hypodermic injection and go away. If I did not do this I could go away, as that was all I was called for. It had come at last to the only thing that was sure relief—the deadly morphine.

The case was an interesting one and I sparred for time and wind.

I absolutely refused to give the morphine unless I had tried other means and found that they were of no avail. After a careful examination of his heart and finding that all right, I administered a small quantity of chloroform by inhalation. This gave him some relief and a little sleep. While he was asleep, I examined his urine and found that it was acid, containing a quantity of phosphates above the normal, while the specific gravity was 1025.

A half-hour's sleep brought him to consciousness and pain again.

I had, in the interval, made up my mind that it would do no harm and possibly some good if I unloaded his bowels thoroughly, so I gave him a teaspoonful of thialion, dissolved in a teacupful of hot water, and had him drink it as warm as possible. This was repeated in two hours. An hour after the last dose, he had two copious evacuations,—the large mushy stools, that thialion invariably produces.

While this medicine was getting in its fine work, I had administered to him small quantities of chloroform so as to keep him quiet; but, after the last passage, he went to sleep and slept well till morning, I staying all night with him.

In the morning, I had a further talk with him which resulted in his consenting to take another dose of thialion, which resulted during the day in two more passages and a copious flow of urine. The relief that this thorough cleansing gave him was immense, and after my call at 6 p. m., I left him at his request for good.

Four days after my last visit, he called at my office stating that he wanted to know what that medicine was I gave him and to get some more. He said it certainly made him feel better. I ordered him to procure a bottle of thialion, and take a teaspoonful each morning on rising, dissolved in the same quantity of hot water. It was to be taken as hot and as early after waking as possible. He called again in a week and to my surprise, he said that he had not had any headache since I made my first visit, but he felt a little nervous and was afraid that he would have one in the morning and asked me to be sure and call, which I did. I found him with one of the headaches sure enough, but of a very mild character. By ten o'clock he was out-doors walking about, a thing he had not done in years on a headache day.

According to my instructions, he continued the thialion every morning; and, from this time on for the next six weeks, he had two mild attacks only, and then they left him for good, at least he has not had an attack since. He still takes a teaspoonful of thialion twice and sometimes three times a week.

I did not at my first visit think that case was one of uric acid headaches. In fact I was at a loss for a diagnosis, and I gave the thialion alone to relieve the hepatic torpor and sluggishness of the bowels that I felt sure to exist. The effect of the remedy was so marked from the very first almost, and its continuance so happy in results, that I am satisfied that the uric acid played an important part in this drama of pain and suffering, and that the thialion united with the uric acid forming a soluble salt which was quickly washed out of the system, and the cause of all of his sickness thus removed. It is unnecessary for me to say that Mr. M. is my good friend, and he showed his appreciation of my skill in getting him out of his trouble with a handsome check.

CASE II was that of Mrs. C., aged 69 years, who weighed 190 pounds. She was wealthy, a high liver, meat forming a prominent part of her diet. I was called to see her early in the morning of April 7th, and found her suffering from a severe attack of neuralgia of the right arm. The pain was lancinating and so severe as to necessitate a hypodermic injection at once and before I could make an extended examination. After it had eased, she told me that she had suffered from this pain at intervals, differing as to the length of time, for the last three years. She had tried a host of remedies and doctors, but without any permanent benefit—

the morphine alone giving relief. This had to be continued for a couple of days when the pain went away only to return again in a short time.

Having the case of Mr. M. in mind, I gave her a teaspoonful of thialion every two hours till the bowels moved thoroughly, which happened after the fourth dose, the morphine probably interfering with the action of the medicine somewhat. She, as well as myself, was astonished, when at my evening visit she informed me that she had had no more pain and that she was quite comfortable, and I found the same condition in the morning when I made my next visit.

I directed that the thialion should be kept up in the same dose and manner twice a day for two days and then but once a day, that in the morning. In the course of two weeks, there being no return of the pain, the dose of thialion was taken but twice a week. From that time till now she has had no return.

The neuralgic pain in this case was without doubt due to the excess of uric acid in the system, and which the thialion dissolved, freeing her from her enemy of years' standing.

CASE III. Mr. D., a mechanic, called at my office on the 2d day of May, giving me the following history. He was 29 years old, American, married man of family, temperate, but using tobacco freely. He was a hearty liver, weighing 170 pounds, and standing about six feet in his stockings. His bowels were regular, but for the last three months he had suffered very badly with irritability of the bladder. He could not hold his water as he used to do, making it five or six times a day, and what was the most annoying of all, he had to get up two or three times in the night.

He said he had had no blow or other cause that he knew of to give rise to the trouble, but it was mighty inconvenient and he wanted it stopped. Knowing from experience, that thialion will remove pain in the kidneys when present from irritation, I thought I would try it on him. I gave him a prescription calling for a bottle, directing him to take a teaspoonful dissolved in a teacup of hot water three times a day and to come and see me on the second day after. He did this, and on his next visit he complained of a very bad looseness of his bowels; but his pain was much better.

I directed him to take the thialion every morning on rising; and in a week he was entirely relieved from all of his disagreeable symptoms. The third day, he stopped me while I was passing his house, saying he wanted to show me what he passed with his water. At the bottom of the vessel which he had saved there was a thick coat of uric acid crystals. They were fastened to it, and could hardly be removed with aspolio. The quantity was greater than I ever saw in any specimen before.

This case was a revelation to me of the power of this drug and its wide range of application.

LATENT GOUT OF THE MENOPAUSE.

BY L. N. WILSON, M. D., NEW YORK CITY.

(Reprinted from the *New England Medical Monthly*, September, 1898.)

My attention was attracted to this, to me, new subject, first, by a paper which was read before the British Gynaecological Society and afterwards published in the *British Medical Journal*. I do not remember the author's name, but the paper impressed me very forcibly as being an able one and on a subject which was not very much understood, if at all, by the profession. It was not a great while afterwards before the following typical case presented itself, and as it is so uncommon or at least so infrequently recognized I made up my mind to report it:

Mrs. T., a widow, 46 years old, American, mother of two children, had always weighed about 135 pounds till about a year ago, when she began to take on flesh rapidly and at the time of this consultation, October 3, 1897, she weighed 201 pounds, while standing in her stockings she measured five feet nine and one-half inches in height. This increased stoutness was accompanied with much muscular flabbiness.

At the time of the commencement of this flesh taking (the year previous) her menstruation became irregular and she presented all of the symptoms of those women who are approaching the menopause. She first menstruated when she was fifteen years of age.

The symptoms, presenting, were great irritability and restlessness, shortness of breath, especially on the least exercise, with cardiac debility. The hands, feet and face were puffed up, while there was present great mental and bodily lethargy.

There was broken and disturbed sleep, with a feeling of weariness on rising in the morning. In fact it was the middle of the forenoon before she was able to pull herself together. She suffered severely from headache, the attack coming on at any time of the day and lasting for an hour or several hours at it might be. None of the remedies useful for headaches seemed to have the least effect on her and she simply had to wait till they went away.

Neuralgia, especially of the back of the head and neck was present almost constantly, in fact was so persistent at times that she would be compelled to take to her bed and remain there till it in a measure subsided. She suffered from indigestion and dyspepsia accompanied, with much flatulence, together with a most obstinate constipation. She also complained of lumbago with a host of vague muscular pains. The tongue was coated, but she had no bad taste in the mouth, though the breath would indicate that she ought to.

An examination of the urine showed that below the normal quantity was being voided. The reaction was acid. Urates and uric acid crystals in abundance. No casts; no albumin. Specific gravity 1029. She had tried many remedies, treatments and diets in vain. Her condition was pitiable indeed. It seemed that ere long her mind must give way under the strain.

I directed her to take a teaspoonful of thialion, three times a day, dissolved in a teacupful of hot water, drinking it as hot as she could and, if possible, one hour before the meals. On my visit on the 4th, I found that she had had two free evacuations immediately following the third dose of the medicine, while there was an increased quantity of urine voided, which was of a lighter color. Directed the medicine continued as before.

October 5th, I found that she had had three more movements from the bowels since I was there last, the third of which was of a very loose character, of a dark brownish green color, smelling horribly, and stinging around the anus in its passage, indicating bile pure and simple. All of the rest of the symptoms were slightly improved. The thialion was then reduced to a teaspoonful each morning on rising.

October 6th, patient much better. Quantity of water voided much larger, the urates and uric acid lessened markedly in quantity; the complexion, which had been sallow and yellow, was clearing up, and the sleep had returned in a normal way. Spirits were better. She was much more happy and less depressed and irritable. Puffiness of the hands, feet and face much reduced and rapidly diminishing. Muscular pains greatly relieved, and so much of an improvement presented itself that the patient and family were delighted and appreciative.

From this time on, for two weeks, the progress toward recovery was uninterrupted; the dose of thialion was given on rising each morning and in the same manner—the improvement being progressive and sure. At the end of two weeks, it was taken only twice a week, then once a week for a month, when the cure was complete.

The transformation from the misery and pain, in this case to that of health, was little short of wonderful. The scene was completely changed from sickness and suffering to health and happiness.

In the paper alluded to at the beginning of this article the author insists that the treatment must be directed:

- "1. To increase the elimination of waste products from the blood.
- "2. To disperse the morbid products in the lymph spaces, lymphatics and muscles.
- "3. To improve the state of the sympathetic nervous system."

This the thialion did, as I consider no other known remedy could have done, surely not in the same length of time and with the same certainty. The general treatment included regulated exercise, the heavy meal being taken in the middle of the day; and regular hours.

IRREGULAR GOUT.

BY JAMES S. KENNEDY, M. D., CHAMBERSBURG, PA.

(Abstract from *Goillard's Medical Monthly*, September, 1898.)

Gout, according to Osler, "is a nutritional disorder, associated with an excessive formation of uric acid and characterized clinically by attacks of acute arthritis, by the gradual deposition of urate of soda in and about the joints, and by the occurrence of irregular constitutional symptoms."

By the laity and many physicians, gout is supposed to only effect the articulations of the great toe, but this is a grave error, as it may occur in any of the articulations and even in the muscles and tendons. Wherever the urate of soda is deposited, there will the symptoms of gout manifest themselves. Taken in this broad sense, gout is extremely frequent among the American people, and is undoubtedly growing more so, as the various sedentary occupations increase and physical exercise becomes thereby curtailed.

The vast majority of the medical profession admit now that gout is primarily due to a deposition of the insoluble urate of soda in the tissues and articulations. The blood shows a great increase of uric acid, and Garrod believes that acute attacks are due entirely to the accumulation of urates in the blood.

The treatment may be divided into the hygienic, dietetic and medicinal.

The medicinal treatment has, until recently, proven rather unsatisfactory in the author's hands. Mineral waters are but feebly beneficial, and such drugs as colchicum, iodide of potassium and guaiacum are sometimes though rarely useful. Lithium is strongly recommended by Osler, but the author met with but little success with it until quite lately, when a combination of lithium with an alkaline laxative, known as thialion, was brought to his attention. Thialion has been used in several heretofore intractable cases with really surprising results, as the two typical cases which follow, demonstrate:—

CASE I. This case is a good illustration of that form of irregular gout, where the symptoms are mainly gastro intestinal. J. H., *et. 30*, American, family history, gouty. Complexion sallow, and rather cadaverous. Examination of urine showed large quantities of calcium oxalate crystals and a few uric acid crystals. Reaction acid, specific gravity, 1.029. His tongue was thickly coated and the breath foul.

The patient came complaining of periodical attacks of nausea and diarrhoea, constipation being present in the interval. These attacks occurred about every three weeks. He complained also of the following symptoms: Vertigo, pain of a shooting character in the arms and legs, headache, a peculiar gnawing feeling in the stomach continually, and great lassitude and weakness.

He was given directions concerning diet and exercise, and directed to take a teaspoonful of thialion in half a glass of hot water three times a day for two days and then once a day, immediately after arising in the morning, until told to stop.

He faithfully followed directions and reported himself in two weeks as decidedly better. At the end of a month he reported as being entirely well, and said that for ten years he had not felt as well as he did at the present time. The change in his appearance was really remarkable and proof positive of the value of the treatment.

CASE II. M. C., female, *et. 27*, had suffered for some weeks from the following symptoms: Pain, sometimes sharp, sometimes dull, in the joints of the feet and hands; heat and tenderness in the feet, constipation, headache, and a general feeling of malaria and lack of ambition. At times the pains in the small joints were so severe as to awaken her from sleep. She had observed that when the pains were most severe, her urine deposited a brick dust sediment. An examination of the urine showed a highly acid reaction, large amount of urates and a high specific gravity.

She was put upon the same treatment as the above case; and, at the present time, three weeks after commencing treatment, her symptoms have entirely disappeared and she feels perfectly well.

These two cases cited show the effect of this new lithium combination in this disease, and it would seem that in thialion we have a most efficient agent in combating irregular gout.

GRAVEL.

BY J. ALEXANDER WADE, M. D., DANBURY, CONN.

(Abstract from the *Toledo Medical and Surgical Reporter*, October, 1898.)

Certain solid substances which are usually carried off with the urine are sometimes precipitated, crystallized in the tubules of the kidneys or any of the other portions of the urinary passages and voided in crystals which are always visible under the field of the microscope and oftentimes to the eye alone.

This condition is called gravel, and is one of the most distressing complaints that the physician has to deal with. The cause of these crystals being thrown down is, that there is too much concentration of the urine, it becomes too heavy in the organic constituents, and, as most frequently met with in general practice, is composed of uric acid, the red sand which quickly forms around the sides of the vessel in which it is voided. Those suffering from a gouty diathesis, especially when aided by a sedentary life and high living, are more likely to have this disease, though I have met with it in every condition of life.

Until lately, I have been at sea about the treatment of these cases. Some I have cured but it always seemed by the grace of God rather than by my treatment. Now the whole scene is changed. Since the new salt of lithia called thialion, has been discovered, which is absorbed, which does go into the system and form the soluble salt, my troubles are over as to the treatment of gravel. Every case has yielded. The relief has come quickly, at once, almost; and I have been able to prove that it was the thialion that was doing the business, by chemical and microscopical examination of the urine, showing the lithia present inside of four hours after administration.

Let me cite just one case out of the many. Mr. G., aged 53, a well-to-do farmer, weighing 160 pounds, sent for me to come and see him on the 6th of December, 1897, and I found him with the following history and symptoms. His father and mother, who lived to a good old age, had suffered from rheumatism greatly, while the father, who was never a fat man or a big liver, suffered for years from the gravel and the subsequent kidney colic attacks. My patient had had the attacks like the one which he was now suffering from, for the last five years. Had had three different doctors, who had doctored and doctored him in vain. At first he had an attack every six months, but now they come on once in about three months. His bowels were only in a fair condition; and you will find that most of these cases suffer from constipation in some of its degrees of severity. The only thing that gave him relief from his severe pain was morphine, and he begged me for that. An examination of his chamber showed it incrusted all over the bottom with the reddish brown deposits which indicated an excess of uric acid crystals. His wife said that she simply could not remove it even with sand.

He was in great pain, rolling from side to side in the bed—it being greatest in intensity in the left side over that kidney. The pain streaked down the leg and into the testicle on that side, drawing that organ up tightly into the body. The tongue was coated and his breath foul. The water was scanty and highly colored, with a high specific gravity. I ordered him to take a teaspoonful of thialion, dissolved in a teacupful of hot water, and repeated every two hours until the bowels moved freely. This took three doses. His pain was lessened after the second dose and became bearable. After this he took two doses, morning and night, before meals for three days, and then one dose on rising in the morning. His bowels became natural, his health improved rapidly, the urine became normal, no more uric acid crystals were excreted and no more attacks of nephritic colic. In fact he has not lost a day on account of sickness since the attack above mentioned.

THE TREATMENT OF THE URIC ACID DIATHESIS.

BY F. E. HALE, M. D., PROVIDENCE, R. I.

(Abstract from *The Medical Mirror*, June, 1898.)

Among the multitude of cases which come before the general practitioner for treatment none are more urgent in their demands for relief or, in many instances, more difficult to relieve, than those suffering from the various manifestations of the uric acid diathesis. This peculiar

inability of the system to eliminate the uric acid formed, for, according to the best authorities the condition depends upon lessened excretion rather than increased formation, is to blame for a myriad disagreeable and dangerous symptoms, which call for treatment.

E. B., German, æt. 25; first came to me complaining of constipation, nausea, headache and severe muscular pains in the arms and legs. He worked indoors most of the day and took but little exercise. His complexion was sallow. There was a degree of emaciation present and he complained of great soreness of the muscles of the arms and legs, on pressure upon them. His urine was scanty, specific gravity 1.032, strong acid reaction, slight reaction to albumin, dark red in color, with a large brick dust sediment. Microscopical examination revealed large quantities of uric acid crystals and a small quantity of amorphous urates. He was put upon thialion, t.i.d., and told to report in a week. In just a week, he returned and stated that he was feeling much better, the soreness and aching in the muscles having disappeared, his bowels being regular and nausea and headache also gone.

His urine was examined with the following results: Specific gravity, 1.022, color, light yellow and clear; no sediment, no reaction to albumin and alkaline reaction. The microscope revealed nothing of importance save a small amount of amorphous urates. He was told to continue the treatment for a month longer; and at the present time is so greatly improved that he has discontinued the medicine.

Mrs. D., American, married, aged 26, no children, from a gouty and rheumatic family, consulted me on the second day of April, with the following symptoms: A patch of eczema on the right arm of about the size of the hand. This patch had been there ever since she was 18 years old. All treatment was of no avail.

Pains in the joints, especially of the hands and feet, also frequent gouty pains in the uterus. These were especially bad at the time of menstruation. Constipated,—large doses of medicine being necessary to get a fair movement. Sleep bad, and appetite capricious. On rainy days, pains would radiate through all of the joints and bones of the body. Urine scalding at times, and not normal in quantity; very acid.

I commenced to give her a teaspoonful of thialion twice a day, keeping this up for three days. The bowels moved very freely, but the patient felt better after the fourth day had ended. Then a dose was given each morning for two months with the result of complete restoration to health. In this case, as in all of the cases of uric acid poisoning which I have treated with thialion, the bowels acted regularly and the constipation was effectually cured. All of the gouty symptoms passed away and a complete restoration to health followed. Strange to say, the eczema also disappeared and now there is no sign of it.

One thing particularly noticeable in this case was the rapid disappearance of the insomnia after taking thialion. She had been a very bad sleeper before, but the second day after commencing treatment, she slept well nights and was not troubled with insomnia afterward.

Frank H., 53 years old, consulted me about the middle of January. For years he had suffered from chronic gout which had been complicated with torpidity of the liver,—great yellow and dark brown liver spots appearing over the face and hands chiefly; eyes yellow, and the general hue of the skin of the whole body was that of a person who had a good deal of derangement of the liver. Joints, especially the tarsal and metatarsal and phalangeal, were tender, stiff and enlarged. He has to be on the road a good deal, consequently the meals were eaten in an irregular manner and all of his habits broken up more or less. The bowels were constipated, the tongue coated, with a vile taste in the mouth. The urine was scanty and high colored, with a specific gravity of 1.029.

He was placed on teaspoonful doses of thialion, dissolved in a teacupful of hot water, three times a day, for three days before meals, the first one taken as soon as getting out of bed in the morning. At the end of the second day, he came to me and said that his bowels were too loose, so I directed that he should take only one dose a day and that on rising in the morning. He went away from home for a short business trip and I did not see him for six days when I found his condition much improved. The color of his skin and eyes had become normal and the liver spots were much fainter. The urine was increased in quantity, the tenderness

was lessened in the joints and taken altogether he was very much better. He recognized this himself and was grateful for it.

A teaspoonful was directed to be taken each morning, which was faithfully carried out for two months, when every vestige of the trouble had disappeared. His liver spots were no more (this was a surprise to me, as I did not know that thialion acted in this remarkable way on the liver), his complexion was clear, his joints normal and he was well. This patient coming from a gouty family, I suggested to him that he take, once a week, a morning dose of thialion as a prophylactic.

I was called to see Mr. W. on the evening of January 10th, and on my arrival I found him suffering from an attack of nephritic colic. In telling me his history, he said that his father had had the gravel before him and that this was the ninth attack. His pain was excruciating. The paroxysms came with the regularity of labor pains. Hypodermic injections of morphine, one-quarter of a grain at a dose, till three doses were given, dispelled the pain at last, though a good deal of soreness lasted over the left side for a week. A careful examination of the urine, the day after the attack, showed some small stones of uric acid. He was put on thialion the second day after the attack, as his stomach would not tolerate it the next day. It was given to him dissolved in a teacupful of hot water three times a day for three days, and after that once a day in the same media on rising in the morning. In twelve hours, the urine showed a large increase of uric acid, in fact the quantity excreted was phenomenal. The pain left his left kidney, his bowels became normal and he improved rapidly. Since then he has had no attack, though rarely six weeks elapsed without one, before taking the medicine, —though four months now have passed. He now takes thialion once a week.

Mr. R., aged 39, a resident of an adjoining town, a jeweler by trade, called at my office the 11th day of April, complaining of a burning pain at the neck of the bladder and frequent micturition (in fact so frequent that he seemed unable to hold but a few drops of water at a time), pains streaking along the inside of his legs, much tenderness over site of the bladder.

He gave no history of gonorrhœa, recently or ever. Had had wakeful, restless, painful nights. Nervous, irritable, rapid pulse, coated tongue, conjunctiva yellow, with a sallow complexion. He thought that his trouble with his water came from a cold which he caught a week ago, when it first commenced. He had been to two physicians with no benefit and life had become a burden.

I advised him to stay at one of the hotels all night, so that I might see how the medicine acted, for it was evident that the man's condition was such from loss of sleep and pain, and that he must get relief and that quickly. I ordered him to take a teaspoonful of thialion dissolved in a tumbler of hot water, to drink as *hot* as he could. This was at eleven o'clock in the morning. As soon as this was done, I sent him to take a Turkish bath, directing that he should stay in the hot room at least 25 minutes. He was then to lie down and keep quiet till it was time for him to take the second dose two hours later. On calling to see him at the hotel at nine o'clock that evening he said his suffering began to be relieved in a half hour after he had taken the first dose, and that he had taken four doses. The desire to urinate had wonderfully decreased and he was very comfortable, excepting that his bowels were moving very freely. All medicine suspended till morning, when he took another dose of thialion as soon as he awoke.

He went home at noon with directions to take a teaspoonful of thialion twice a day for two days, and one teaspoonful each morning after that for a week. This man was a hard drinker, and at his next visit a week later he said: "Did you give me anything to kill the taste for liquor, for if you did it did its work effectually. I have not had the slightest desire for liquor since I saw you last."

He told me at this visit that he had to suspend the medicine for two days because it moved his bowels too freely. He now had no more of the cystitis and was entirely well. The experience in this case was as in the others, constipation entirely relieved, sleep returned and the liver acting normally, as was shown by the natural color of the conjunctiva and skin.

NEUROTIC LITHEMIA.

BY CMAS. F. CRAIG, M. D., ASST. PATHOLOGIST, U. S. A.
(Abstract from the *Southern Practitioner*, Jan., 1899.)

The relation of uric acid to diseases of the nervous system is a subject which has received but very little consideration, although it is a most important one. There can be no doubt but that uric acid has an irritant action upon nerve tissue and that its deposition in the body is followed, in many cases, by symptoms which can only be referred to such action. There is a large class of cases in which the uric acid diathesis is manifested almost entirely by clinical phenomena resulting from the injury done to the nervous system by the retention within the body of this agent, and as there is no account of this class of cases in medical literature, a short description of their characteristic symptoms may be of value.

John B., at 30, a laborer, came to the author complaining of insomnia, occipital headache, attacks of vertigo, loss of appetite and general restlessness and nervousness. He also complained of soreness and aching in the deltoid and biceps muscles, and also in the muscles of the thigh. His work, that of a truckman, was not heavier than usual, nor did it seem to fatigue him more than it had done for months. His general appearance was good, save that he showed the lack of sleep and seemed very nervous and irritable when talking. He said that he had not slept more than two or three hours a night for two weeks. His habits were temperate in every respect. Examination of his urine showed a specific gravity of 1.036, strong acid reaction, and a heavy sediment consisting almost entirely of calcium oxalate crystals and urates. His bowels were habitually constipated.

He was put upon teaspoonful doses of thialion, in hot water, for each meal, for three days, and then the same dose morning and evening, and told to report in two weeks. He also received directions concerning his diet. At the end of two weeks he reported as considerably better, his sleep being much improved, but being still troubled by headache and vertigo. The same treatment was persisted in for two weeks longer, at the end of which time he reported that he was sleeping soundly all night long; his headache and vertigo had ceased and his bowels were regular.

Mr. H., American, aged 42, weight 210 pounds, married, consulted me about nine weeks ago, with the following symptoms. For a long time he had suffered from insomnia, together with great irritability. Usually a delightful man in his family, he noticed himself, as did his wife also, a gradually increasing irritability. On the slightest provocation and sometimes on none at all he would break out in seemingly uncontrollable fits of passion. He became exacting and fault-finding to such a degree that living with him became a burden.

He complained of pain down his back with points of tenderness in the lower part of the spinal column. Had fits of despondency and loss of sexual desire. The bowels were fitful in their action, constipated for a week, and then loose for a day or two. Tongue coated in the morning, with capricious appetite. Urine high colored, specific gravity of 1.026 and deposit of brick dust in the vessel after standing, which it was found difficult to remove. Inability to work, especially mental effort, was noticed and being fond of using the typewriter, he found himself striking off the wrong keys, using the wrong words in trying to express himself. At times he had a shuffling gait.

These symptoms continued, gradually growing worse, till the consultation mentioned above was held. My first desire was to clean his system out of the uric acid and regulate his diet. I commenced giving him a teaspoonful of thialion, dissolved in a teacupful of hot water, three times a day before meals for three days. This had the desired effect of cleaning out the bowels thoroughly and starting the bile in its natural channel.

Diet restricted to fresh vegetables and cereals, no meat allowed for a week. Then thialion was given every morning on rising in the same dose, and also 1-20 grain of strychnine was directed to be taken three times a day. At the end of the week, the bowels continuing loose, the dose of thialion was reduced to one-half teaspoonful. He was allowed the ordinary food at the table, but smoking and drinking were tabooed. Improvement at this time was marked. The general symptoms gave way and at the end of two and one-half months of the thialion treatment, he

had entirely recovered. In this case the nervous phenomena were markedly prominent, and there is no question that when he first consulted me his condition was critical. At this date, June 1st, he says he is entirely well.

TWO CASES OF URIC ACID HEADACHE

BY C. L. TARLETON, M. D., CEDAR CITY, MO

President of the Board of Examiners for Pensions, etc

(Reprinted from the *Wisconsin Medical Recorder*, February, 1899.

The following two cases, yielding so promptly to treatment, were unique in my experience, inasmuch as they were both probably due to malarial origin combined with a sluggish liver, such as oftentimes pertains in this section of the country and is almost always associated with an excess of uric acid in the blood. Nothing seemed to give relief until I used thialion, and then the work was accomplished as if by magic.

The first case was that of Emmet W., age 11, who was taken sick on the 15th of August, 1898, with a profound chill, followed by high fever. One of the local physicians was called in at this time to see him, and he had charge of the case until September 26th, when I took charge of it. I found him free from the fever, with a badly coated tongue, sallow skin, constipated bowels, with highly colored urine, which contained quantities of urates and phosphates, and had a specific gravity of 1.012. As night approached he complained of a severe pain in the head, which was not confined to any definite point, but seemed to radiate through all portions of the brain. The peculiar feature was that this lasted only during night time, disappearing as day approached. I tried everything—calomel, quinine in large doses, strychnine, bromides and tonics—but the only relief he could get was through opium. The bromide of lithium gave him more relief than any other remedy before I tried thialion, but none of these remedies seemed to have the desired result of curing the patient; the pain still continued in greater or less degree. On November the 5th, I commenced giving him thialion, directing that a teaspoonful should be taken the first day three times, one hour before meals, dissolved in a cupful of hot water, and drunk as hot as possible. The second day, two doses of similar size were administered, and after that one dose a day was sufficient. The effect was immediate; the pain was relieved of its great intensity. The first night, much relief; the second night, very little pain; and the third night, none at all, and none since that time. A dose of thialion was given once a day for two weeks, and once every third day for two weeks more and then stopped. He is now perfectly well, entirely free from pain, gained in flesh and strength, and seems in perfect health. The bowels, which before this were in a very constipated condition all the time, are now moving naturally every day, the thialion having cured this obstructive condition which had lasted for years.

Case 2, is that of John V., age 33, farmer, married. He was taken sick on the 4th of December, with violent pain in the head. The people here call this a "sun pain." I was called to see him on the 10th. In the interim between the attack and my seeing him first, he had tried many patent and domestic remedies without any result. On my first visit he was a pitiable subject indeed, pain radiating through the brain, causing intense suffering. Remembering my experience in the other case, I put him at once on thialion, ordering a teaspoonful in a cupful of hot water every two hours until it operated well, and then every morning before eating. The result was magical, the pain diminishing rapidly, and in three days he was entirely free from it; though the medicine was continued once a day for a considerable time. There has been no return of the attack, which was over a month ago.

These two cases were evidently caused by an excess of uric acid in the blood, and were promptly relieved by thialion, which I consider a most valuable addition to our therapeutics.

URIC ACID AS A CAUSE OF ASTHMA.

BY L. H. WATSON, M. D., CHICAGO, ILL.

(Abstract from the *Southern Medical Record*, Feb., 1899.)

I desire to call attention particularly to the "uric acid storm" as a factor, and a large one, in the production of the asthmatic paroxysms. Haig says in *International Clinics*, Vol. III:

"My researches leave little doubt that asthma represents the effect of uric acid on the circulation of the thorax, and that it is paroxysmal, for the same reason that epilepsy and migraine are paroxysmal, in accordance with the natural fluctuation of the uric acid, and the amount of that substance passing through the blood, and furthermore the only way to treat asthma is to clean the blood of uric acid and keep it clean."

Two confirmatory facts would seem to favor Haig's hypothesis; the first is that most attacks of asthma occur at from 2 to 4 o'clock in the morning, when the uric acid flood is at its height; and the other is that after an attack of asthma, as after a uric acid storm, there is a flow of limpid, pale urine, in great abundance. Upon the whole, the uric acid theory offers us, perhaps, the most feasible theory known at the present day to account for the peculiarity of asthmatic attacks. I append two typical cases.

Miss L——, a maiden lady, 50 years of age, a long sufferer from hay fever, which usually begins in August and lasts until the first frost. In November, 1898, she suffered from persistent asthmatic attacks which were supposed to be due to the hay fever. Obtaining only small relief from all the usual remedies, she placed herself under the care of a specialist, who proceeded to cauterize and burn out the redundant nasal mucosæ, which seemed to be the irritating cause of her attacks. The asthma continuing, she came under my care. Discovering her to be a confirmed dyspeptic, I first attended to her diet and placed her upon thialion. In a couple of weeks, relief came, and in six weeks after the treatment was commenced she had no further attack.

The second case was that of an old asthmatic, Mr. K——, who was also an old dyspeptic. Winter and summer this gentleman, who possessed a large amount of this world's goods, was constantly using Himrod's pastilles and cursing his fate. Thialion, combined with treatment directed to get his stomach in fair condition, has so relieved him that I cannot persuade him to stop its use. He takes it constantly every morning in hot water, and while he wheezes a little now and then when he has been indiscreet at the table, otherwise he is in good health.

PSORIASIS, HEPATIC TORPOR, GOUT, AND CORPULENCY.

BY C. H. POWELL, A. M., M. D., ST. LOUIS, MO.

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(Abstract from *The North American Journal of Diagnosis and Practice*, March, 1899.)

Having had my attention directed to thialion, a laxative salt of lithia, in the treatment of rheumatic and gouty disturbances, as well as in corpulency, and experiencing so little satisfaction with the other agents in the field, induced me to experiment, which put the remedy to practical tests. The first case where it was administered was that of an aged patient, whose finger joints were all distorted from gouty deposits. I gave a teaspoonful three times a day in a little hot water, and continued the preparation for one week. There was no perceptible change in the swellings, but the pains, which had previously been a source of great annoyance to the patient, became markedly ameliorated, and she gained in weight about one pound in the course of two weeks' time.

A lady consulted me about the same time with a most extensive case of psoriasis I have ever come in contact with, the entire body being one mass of sores from the neck downward. Having used every remedy from arsenic to thyroid extract without the least improvement, I placed the patient upon thialion in teaspoonful doses every four hours in as much hot water as she could tolerate. The incessant itching at once abated, and the patches became paler in

appearance losing their characteristic scarlet hue, coincidentally the scales would flake off in large quantities, and the patient was greatly benefited from the very beginning. Seeing the improvement so well marked I determined to reduce the amount of the drug, and accordingly gave a teaspoonful three times a day in place of every four hours; the disease from that very moment seemed to take a fresh hold and I resumed the previous dose, whereupon she again gained in every way. As is a well known fact which all writers attest, psoriasis is intimately connected with a gouty diathesis, and it is my belief that the efficacy of thialion in the case was due to its beneficial influence upon the diathesis.

I placed a gentleman who was excessively corpulent upon thialion every four hours and noticed a reduction of five pounds during its administration; I also dieted him during this period and am accordingly doubtful as to the credit attributable to the remedy alone. Certainly, however, the results were satisfactory and thialion should be credited with its share of the outcome.

One of the very best uses of this salt, however, was found in its efficacy as an hepatic stimulant to be given after a patient's recovery from an acute attack of malaria or grip. As we all know hepatic inactivity is particularly preponderant after the disease has ended. This is shown by the patient losing appetite, they complain of general debility, have a pain in the back, are annoyed by hyperacidity of the stomach, and upon awakening in the morning have a bitter taste and a heavily coated tongue indicating a cessation of secretion, especially of the bile and gastric juices. Give this class of cases thialion in teaspoonful doses in a half a glass of hot water one-half hour before meals, and these unpleasant complications will not only be promptly removed, but the patient gain in strength and weight with a surprising celerity. In order to secure these results the remedy should be given alone and in the manner outlined. I am thoroughly satisfied from my own experience with this preparation that it has a wide and useful field in the different conditions herein outlined. I have resorted to it in several other cases where an hepatic stimulant is indicated and have yet to find the patient afflicted with this unpleasant complication it will not materially cure.

LITHÆMIA.

BY ALLAN P. MACDONALD, M. D., DANBURY, CONN.

(Abstract from the *Homoopathic News*, St. Louis, Mo., April, 1899.)

The medical profession is waking up to the fact that the uric acid diathesis is more of a factor in the causation of chronic ill health than has heretofore been taught in our text-books or medical schools. Uric acid is very sparingly soluble in the urine, and when from any cause it is formed in the tissues of the body in excess of the normal capacity of the kidneys to eliminate it, it becomes the cause of many diseases, which from the nature and difficulty of removing the cause, is the *bête noire* of medicine. In the grosser forms of disease under this head, such as gout and nephrolithiasis, the diagnosis is easily made, but in some cases of dyspepsia, asthma, neurasthenia, nervous palpitation of the heart, muscular rheumatism and other obscure ailments, it is more difficult to arrive at a correct diagnosis and in a large proportion of cases require a microscopical examination of the urine.

All cases of the above named diseases do not have uric acid as an etiological factor, and if the physician is not on the watch for the uric acid, it will not force itself on his observation.

The treatment is palliative, but you have the satisfaction of knowing that you can keep your patients free from distress, and at the same time prevent the deposits of the acid in localities where it may become the nidus of some organic disease. How many valvular diseases of the heart, how many apoplexies are due to the deposit of this substance on the valves of the heart, in the walls of the arteries? We frequently see calculus in the kidneys and the bladder as a result, which if not removed, will end in great suffering and early death.

CASE 1. Mrs. H., aged 41, had been suffering for eight years from headache, flatulency, palpitation of the heart and irregular and intermittent pulse, a combination of symptoms which always produces great anxiety and distress of mind, which is hard to control. She con-

sulted quite a few of our local physicians and two eminent members of the profession in New York. All assured her that her heart symptoms were due to indigestion, but no remedies directed toward the cure of this disease gave her any relief.

Early in September last, the case came under my observation. I made an examination of her urine and found an excess of uric acid. I placed her on thialion. She took one teaspoonful of thialion in hot water, half an hour before each meal for two days, till the urine became alkaline; after this, once a day, before breakfast, for two weeks. At this period, finding her very much improved, it was continued every alternate day. She was dismissed completely relieved of all her symptoms about the first of January.

This was the most brilliant cure I ever saw in any similar difficulty. Although the uric acid tendency is still present, to all intents and purposes it is a cure and I cannot but give the credit to thialion as the factor in bringing it about, by eliminating the excess of uric acid from the blood, where it acted as a toxin, reflecting on the heart and other organs implicated.

CASE II. Mrs. A., aged 49. This patient came under my care three years ago. She had intermittent attacks of headache, neuralgia, muscular rheumatism and bronchitis. One time it would be one of the above, another time it would be another. Sometimes she would have two or more in combination.

I saw her on an average of once a week during the three years she was my patient, from one or another of her ailments. In the last part of September, I examined her urine and found an excess of uric acid. I placed her on thialion as in Case I. She improved immediately so that in over two months she has not had a single attack of headache, neuralgia, rheumatism or bronchitis. In January she passed through an attack of uncomplicated grippe without trouble.

Here is a case of a woman who has been ailing for about nine years from various symptoms which were undoubtedly due to the toxic action of uric acid, who had homœopathic treatment directed against her various symptoms for the whole period without practical benefit, became practically a well woman after the exhibition of thialion for its solvent power over uric acid.

BILIOUSNESS.

BY DEERING J. ROBERTS, M. D., NASHVILLE, TENN.

Member of the American Medical Association; Tennessee Medical Society, etc.

(Abstract from the *New England Medical Monthly*, April, 1899.)

Physiological chemistry has made great and wonderful strides, its advance and progress have been most marked indeed; yet pharmacological chemistry has not lagged in the rear. The latter part of this century has witnessed the development of many new remedies, including quite a number of synthetical compounds, as well as special compounds of both old and new drugs and pharmaceuticals, some of which under a special trade mark or copyrighted protection, which extends only to the special name of or designation, have proved of incalculable value. In the many that have been introduced, some, having failed in sustaining the claims made for them, have been properly relegated to obscurity. Yet, others, having material value by reason of stable and known qualities, uniformity of pharmaceutical strength and composition and well demonstrated clinical results, are being used daily by many of the ablest and most reputable practitioners of the day. Among the recent additions to the latter class is a compound of lithium and saline laxatives, given the name of *Thialion*, which has proved of marked value in gout and gouty conditions, rheumatism and rheumatic conditions, neuralgia, chronic constipation and defective hepatic action.

Having given thorough trial to thialion in a number of such conditions, and having obtained such universally satisfactory results therefrom, I have no hesitation in earnestly commending and calling attention to it, feeling convinced that it will prove a "stayer," and will be appreciated by all who will give it a trial. Prominent among the factors in the successful treatment of lithemia or uricacidæmia, or to use the expression with which I have headed this article, "Biliousness," especially if of a chronic or persistent character, may be considered

first, a rigid dietary in which albuminoids and nitrogenous matter are restricted to the minimum, plenty of outdoor exercise and a reasonable amount of labor or duty to absorb attention and prevent morbid introspection; and second, the administration of medicinal agents to aid the system in eliminating the excess of uric acid formed. In acute cases, the mercurial followed by saline laxatives ordinarily is quite effective; but in more persistent conditions as a medicinal agent, I have found thialion more efficacious than any remedy or combination of remedies tried.

In gout, rheumatism and neuralgia, colchicum has long enjoyed a high degree of professional favor, which it has attained by its active eliminant action, increasing all the secretions; yet it is objectionable by reason of its occasional tending to purge excessively, its griping and the distressing nausea it sometimes produces. To get its effects it must be pushed. It unquestionably increases the elimination of uric acid, and could it be deprived of its occasional unpleasant effects would be more appreciated than it has been. No remedy for successfully eliminating uric acid has so successively stood the test of experience as lithium, for the reason that its combination with uric acid results in the formation of a lithium urate, which is the most soluble of all the urates. In thialion we have a combination of lithium with saline laxatives, forming the most active and powerful solvent of uric acid, which with the mild, but efficient laxative effect of the salines add greatly to its value.

CASE I. A brief resume of a few cases in which thialion has been successfully tried is herewith submitted, beginning with the case of Mr. W. M. P., white, st. 39, a commercial traveller, who was the subject of repeated and persistent attacks of sick headache, frequently prostrating him completely for a week or ten days, and leaving him incapacitated for business two or three weeks following. Preceding the attacks he would be greatly troubled with melancholia; everything looked blue and gloomy, and everything seemed to go wrong; despondent and with indefinite anticipations of trouble. Bowels would become sluggish, skin dry, urine high colored, with specific gravity of 1030 to 1035, highly acid. Was always a hearty eater and would not control his desire for meats. Mercurials, followed by salines, occasionally deferred and sometimes lightened the attacks. In August last he was advised to take thialion in teaspoonful doses in half a glass of water every three hours until bowels acted freely—then one teaspoonful in a glass of hot water half an hour before breakfast each morning for three or four weeks. The result has been that he has not since had a repetition, a longer interval than has occurred for years. He has had several premonitions of an attack, but they have invariably subsided under this line of treatment.

CASE II. Mrs. R. J. D., st. 51, nullipara, menstruation ceased six years ago. Had been healthy all her life with the exception of attacks of neuralgic headache, accompanied by distressing nausea and vomiting, lasting for three or four days. Had been subject to same since girlhood. Her father suffered similarly all his life. In her case the prodromata consisted invariably of "a fit of the blues," accompanied by constipation, high colored and acid urine, preceded by increased appetite. Had never passed more than six or eight weeks without an attack and had become so familiar with them could always anticipate them with almost unerring certainty. It was hoped that the menopause would be accompanied by improvement, but disappointment resulted. She was placed on thialion, as in the preceding case, also in August last, and has been free from her ancient enemy ever since by resorting to it from time to time.

CASE III. Mr. R. B. J., st. 58, had been a sufferer from muscular rheumatism for the last twenty years, the attacks increasing in frequency and severity, so much so that the last three years he had never been free at any time from a greater or less degree of agonizing torture. He tried faithfully remedies and combinations of remedies innumerable, including several trips to Hot Springs, Ark., never deriving complete relief. In fact the most satisfactory relief he has had has been since last September, when he was placed upon full doses of thialion until free action from the bowels, and then continuing one teaspoonful each morning. He has had but little if any suffering during the entire time, but has kept up the use of thialion pretty regularly, occasionally taking it sufficiently to produce a full laxative effect.

CASE IV. Mr. H. S. D., st. 48, attorney at law, engaged in active practice since his 21st year. Of full habit, a hearty feeder, but full of energy and active habits. For the past ten years had had quite a number of distinct attacks of gout, which would be relieved by ten

days to three weeks active treatment, accompanied by absolute rest, low diet, etc. Commenced the use of thialion with him in the incipiency of an attack early in September last, and it gave him such satisfactory relief that he now considers himself, with the aid of thialion, to be immune.

CASE V. G. T. W., æt. 49, dark complexion, active habits, blacksmith, had for past twenty years suffered more or less from asthma. The attacks would always be preceded by dullness, low spirits, lassitude, sluggish bowels, high colored and acid urine, of high specific gravity. Had tried remedies almost without number, and had for some time given up to be incapacitated from one-fourth to one-third of each year by means of his trouble. In November last, at the beginning of an attack, I gave him thialion freely as previously cited, continuing it since. He received so much relief within the first week that he says he expects to use it more or less regularly, and especially so if his present satisfactory condition continues.

Other cases might be cited, with such neurotic phenomena as vertigo, tinnitus aurium, insomnia, neuralgia, *et id omne genus*; yet, in all cases attributable to uricacidemia, or, as I have termed it, biliousness, I have found in thialion a combination that has given me most uniformly satisfactory results.

SOME OBSERVATIONS, MAINLY CLINICAL, UPON THE URIC ACID DIATHESIS.

BY ISAAC J. JONES, M. D., AUSTIN, TEXAS.

Late Surgeon to the Texas Confederate Soldiers' Home; Secretary to the State Health Officer of Texas.

(Reprinted from the *Southern Practitioner*, Memphis, Tenn., June, 1899.)

After having had considerable experience in the treatment of these diseases with various salts designated to neutralize the poison and favor its elimination, my attention was called to a new chemical salt of lithia, bearing the commercial name of thialion. This I found to be a laxative alkaline salt, soluble in hot water, and not disagreeable to the taste. It was claimed for this that it not only possessed the well known diuretic action of lithia, but was also an efficient and pleasant laxative. It was this combination of desirable qualities that attracted me. Besides these it possesses other properties worthy of note, being a circulatory stimulant and increasing the flow of bile in a marked manner.

I began the use of the drug upon myself first, having suffered for some years past with a continuous soreness and stiffness in each shoulder joint and running down the extensor muscles of the arm to such a degree that I could not dress, or even lift my hat without pain in that region. I had tried to correct this by appropriate diet, but without success. I had also a considerable degree of constipation and frequent attacks of "biliousness." I began with one teaspoonful of thialion three times daily, taking it in hot water before each meal. In two days the characteristic soluble stools were produced. I continued the use of the drug for one month, taking only one teaspoonful daily. At the end of this time I was entirely relieved of my pain, as well as my constipation, and have remained well. My father having died of valvular heart disease, I had looked forward to the same trouble, as I am his prototype physically, and suffered with the same character of rheumatism. I now feel that I have a reliable weapon to combat the enemy.

The second patient was Dr. W. F. B., a prominent state official, who suffered with the same form of rheumatism as myself, and in addition had severe attacks of migraine almost weekly. He took thialion in the usual dose, a teaspoonful three times daily until its laxative effect is produced, and one teaspoonful thereafter for one month, and was entirely relieved of his rheumatism, and has had no attack of migraine since the first week of treatment. He states that he sometimes feels that he is threatened with migraine, but that a dose of the remedy is sufficient to relieve him of the malaise.

Mrs. E. B. R., aged 30, married, had been suffering with renal calculi for a number of years. Was treated by her father, one of our ablest physicians, without benefit; afterward spent several months in a famous sanitarium at the north with the same result. She took thialion in the usual dose for one month, and since its administration was begun the uric acid deposits have disappeared from her urine, nor has she passed a stone. She has also gained

twenty pounds in weight in three months. I fear that there has been so much structural damage to the kidney that surgical interference will eventually be required.

D. C., male, aged 68 years, was for years a sufferer from rheumatism, being blind from iritis, probably of rheumatic origin. Some years ago the rheumatism disappeared only to be replaced by bronchial asthma of severe type. I exhausted every resource of the pharmacopoeia upon this patient, having him under my constant care in the hospital for four years. The only success that rewarded my efforts was that I found that I could abort his paroxysms with a mixture containing a half grain of codeine sulph. and fifteen minimis aromatic spirit of ammonia to the dose. I gave him thialion in the usual dose for sixty days and discontinued it. He has not had a paroxysm of asthma since. There is no symptom of his disease remaining except a slight bronchial discharge, easily coughed away. He has gained fifteen pounds in weight.

J. F. D., aged 72, male. Old case of bronchial asthma, with much emphysema and chronic bronchial catarrh. He was also under my care for four years. His respiration, at all times difficult, passed to a state of extreme dyspnoea, during his paroxysms pitiable to see. These paroxysms occurred twice a week as a rule, but he was never able to sleep more than an hour or two consecutively, at any time. His condition was aggravated by the least exposure, and by sudden changes in the atmosphere or humidity. I gave the thialion in the usual dose, and continued it for sixty days. He has had none of the severe paroxysms since. Respiration, while still somewhat difficult, is uniform and so much improved that he sleeps normally. In fact after two months' observation I think I can safely say that his asthma is cured, and were it not for the structural conditions engendered by it he would be well.

A CASE OF ASTHMA AND ITS TREATMENT.

BY G. A. GILBERT, M. D., DANBURY, CONN.

(Reprinted from *The Southern Medical Journal*, August, 1899.)

Fred. K., German-American, aged 45, barber by trade, has been a sufferer from spasmodic asthma for the past fifteen years, during the last two of which the asthma has alternated quite regularly with muscular rheumatism. The asthmatic paroxysms have often lasted two or three days, confining the patient to the house. Usually, however, they have occurred during the night, lasting about an hour, during which time it would be impossible for the patient to remain in bed,—his dyspnoea at times being so great that the physician was frequently sent for. Until March of the present year the usual alkaline preventive treatment was adopted, consisting of iodide of potash, Gardner's syrup of hydriodic acid, etc., with inhalations of nitrite of amyl, burning nitre paper or stramonium leaves, during the paroxysms,—the patient hying away to the White Mountains an occasional summer. Under this procedure partial relief would ensue for a short time, when the disease would again appear, disappear and again appear, until patient and physician had become discouraged,—both regarding the case as incurable.

At the beginning of March, 1899, the above method of treatment was entirely abandoned, and the patient put upon thialion and instructed as to his diet,—strongly nitrogenous food being interdicted. The first day, a teaspoonful was given in a cup of hot water every three hours until free catharsis supervened, after which the same dose was given only once a day,—every morning upon rising. This was continued pretty regularly for nearly two months, the patient being told to skip the medicine for a day or two whenever the litmus paper indicated alkaline urine,—the object being to keep the latter at or about the neutral point. In regard to the results obtained by this simple method of treatment, it is perhaps well to note that the patient deemed himself cured at the end of the first month, since which time he has suffered no attacks, either of asthma or rheumatism. His general bodily health is now much improved, an irritable temper has given way to a more amiable disposition, and his nights are devoted to securing the rest and sleep of which his system has been so long deprived. Though after the lapse of twelve weeks, it may, perhaps, be considered too early to declare this patient cured, yet, if proper attention be paid to the condition of the urine, preventing any collection of uric acid by timely dosage with thialion, the writer of this article is satisfied that the patient may be promised immunity from any further attacks of his old complaint.

CLINICAL EXPERIENCE WITH THIALION.

BY LUCIEN LOFTON, A. B., M. D., NORFOLK, VIRGINIA.

President Seaboard Medical Association of Virginia and North Carolina.

(Abstract from the *Medical Herald*, Sept., 1899.)

CASE I. W. K. B., Norfolk, age 35, a liveryman. Family history, negative. Personal history includes the diseases of childhood, with an attack of typhoid fever when he was about eighteen, from which he made a good recovery. After he reached thirty he began to lead a sedentary life, and, being a big eater, rapidly became quite corpulent. As his flesh grew he began to have afternoon headaches, which would invariably be followed by drowsiness and uneasy stretchy sensations in the lower extremities. Finally he developed a gout, which lasted two or three years. Occasionally, dieting and a dosing of salicylic acid gave him some relief. Two years before he came to me he had suffered an acute attack of renal colic, and every sixty or ninety days he complained of passing calculi, which upon examination proved to be principally uric acid. When I first saw this gentleman he resembled very much a man who was bleeding to death with hemorrhagic piles. He was more or less stiff about the joints, had an indifferent walk, a strange expression, a continuous headache with great weakness and a constant desire to pass water. A physical examination disclosed a furred tongue and constipation; the heart and lungs were normal, likewise the spleen, stomach and intestines, but considerable engorgement of the hepatic gland was noted. An examination of the eyes, nose and throat did not account for the migraine. Upon testing his urine I found it distinctly acid, and the detection of uric acid crystals was easily recognized with the microscope. The murexide test gave confirmatory results. A quantitative analysis in a later examination disclosed a drachm and a half of uric acid from urine passed in twenty-four hours. I immediately began the use of thialion in the following manner: Two teaspoonfuls dissolved in a cup of hot water every three hours until several evacuations from the bowels had taken place. I did not regard this man's condition at all favorably, from the fact that he had despaired of ever getting any relief. He talked like a man who had run the gamut in "kidney and liver medicines," as he termed it, and a further course of treatment was money and time thrown away. He returned to my offices in two days and said the medicine had "worked" on his head, joints, liver, bowels, kidneys and bladder, and was prepared now to resume his position and hold his own in the dining room. I gave him a restricted diet, avoiding all rich soups, fat meats, pastries, fermented drinks, etc. A teaspoonful of thialion was ordered night and morning, dissolved in hot water, to be drunk one hour before breakfast and supper. This was kept up three weeks, at the expiration of which time I made an analysis of his urine, and something like fifteen grains of uric acid was noted in twenty-four hours. Three grains of iron by hydrogen had been given in a loose state three times each day. At the expiration of the fourth week the man's natural color was in sight; he voided his urine normally, while his bowels were regular. The liver at this time was found to be free from congestion. At intervals of three or four days this patient was instructed to take a teaspoonful of thialion. Altogether I believe he consumed four bottles of four ounces each. It has been now several months since he took the last dose, and a more healthy specimen of manhood you would not care to see.

CASE II. J. W. M., Norfolk. Female; age 42. White. Family history, negative. Personal history: Had had articular rheumatism mostly all her life. There was some ankylosis of both knees, which necessitated the patient using canes to walk. During damp or rainy weather her condition was aggravated. A teaspoonful of thialion night and morning was ordered and kept up for two weeks. She was given an occasional hot air bath of 35° F. for the ankylosed joint, with subsequent massage, which easily corrected the deformity. Strange to say, I did not find any endocarditis, no valvular trouble or any endarteritis. This patient took the above dose faithfully for several weeks, and, it matters not how severe the weather or how much night air she may expose herself to, her "old trouble" still remains a thing of the past after five months.

CASE III. J. F. F., Norfolk. White; age 37. A contractor. Family history, negative. Personal history, negative, with the exception of an occasional "bilious" attack, which was invariably relieved by some purgative. Two years ago, he began to suffer with a drawing

sensation at the nape of the neck, which radiated to the frontal region. Hot and cold water alternately applied would occasionally give him relief. He had had a number of physicians to prescribe for him in Norfolk, but finally becoming despondent he went to Richmond, this State, where a noted "war surgeon" saw him. He was given a prescription containing iodide of potash, colchici and salicylic acid. While taking the medicine his trouble ceased, but when the medicine gave out he began to suffer worse than ever. He came to me and said: "For Heaven's sake, Doctor, is there nothing that will cure headache?" After he had told me his story I admit I gave him a favorable prognosis with some trepidation. Physical diagnosis revealed nothing other than a complete anæsthesia of the skin from the protuberance of the occipital bone down to the vertebra prominens. Anæsthesia existed for two inches on both sides of this imaginary line. No impression could be made with a needle, hot or cold water or electricity. I gave him four cells of a faradic current with a sponge electrode, with no results whatever. I began the use of thialion immediately, ordering two teaspoonfuls in a cup of hot water three times a day, one hour before meals, for three days. Upon his return he said his headache had nearly left, but the anæsthesia still existed. No manner of liniments excited the nerve forces. When he returned to me in one week's time, after a wholesome massage of his neck skin, I tried the faradic current, and, much to my delight, the skin responded. I kept up the thialion, giving a teaspoonful night and morning for three weeks, together with an occasional electrical seance, and now, after a lapse of over sixty days, he met me in church last night and said he felt like a "new man all over."

CASE IV. Mrs. S. A. T., age 44. Emporia, Va. Family history, tuberculosis, maternal side; hepatic abscess, paternal side. Personal history, has had measles and is the mother of eight children. Patient states that she has suffered for the past fifteen years with engorged liver, and shows now signs of arthritis deformans. Says she is compelled to take a mercurial purge every thirty or sixty days, and when she fails to do this her liver pains her intensely. Presumably, the liver pressing upon the diaphragm gives her an occasional hacking cough, and when she consulted me thought she had tuberculosis of the lungs. Physical examination revealed heart and lungs and abdominal viscera normal, save the liver, which protruded two or three inches below the costal margin. Thialion was administered night and morning in teaspoonful doses for ten days, half the dose was administered for the next ten days at night only, and altogether two bottles were consumed—she sometimes taking a dose of the medicine during a period of six weeks. Nearly four months have elapsed since the last dose was taken and her health is now the envy of her friends.

CASE V. Miss S., Norfolk county. Age 26. Has just left my offices, and a brief history of her case will prove interesting. Physical condition practically normal. She is of neurotic parents and is herself very much tainted. She told me some weeks ago that she had suffered from urticaria for five years, and only the severest cold weather would relieve her of this condition. I tried various internal and external remedies without avail. The patient was becoming despondent and certainly I was. It has been my experience that a good many cases of nettle rash come from uric acid poisoning, and knowing that nothing so well antidoted this condition as does thialion, I concluded I would try it. Two teaspoonfuls night and morning in hot water was ordered. At first the amount was too large and nauseated the patient somewhat but I obviated this trouble by dissolving one teaspoonful of the salt in hot lemonade. This acted charmingly. Much to my delight, and her comfort and gratitude, the nervousness and urticaria has disappeared. She continued the remedy as outlined above for two weeks and I consider her now well.

Neurasthenia. When I speak of neurasthenia, I mean cases of extreme nerve debility. So often is it the case that you find neurotics who have come down to the very lowest plane of despair before consulting a doctor; and the sight as presented is most pitiable. You look for the pathology and nine times out of ten, if you are an honest practitioner, you will acknowledge that the pathology is a "will o' the wisp." All neurasthenics will tell you *why* they are neurotics, but how much confidence can you place in a person who is mentally unstrung? Specialists, in sanitaria and out, must acknowledge their inability to deal with this unfortunate class, at times. Now where shall we look for the etiology? I believe that the majority of cases of this description are the host and hostess of too much uric acid. I further believe

that we would have fewer cases of insanity if this particular field was more thoroughly investigated. I know that I have cured patients who had neurasthenia that have resisted the most strenuous efforts upon the part of good men. Whenever I am consulted for this condition I never give any *real* medicine until I have first investigated the urine.

The Urine. It is here that the profession in years to come will more eagerly submit their claims to recognition as diagnosticians. We cannot become too thorough in making urine analyses. If I had the choice of selection of only one source in making a diagnosis in any case where disease existed, I would choose the urine. Thialion has done more for neurasthenia in my hands than all other medicines I know. I say this advisedly. No set rule can here obtain in the administration of this compound.

Now in conclusion let me speak a word for thialion in the treatment of various forms of Bright's disease.

Bright's Disease. No one will deny that lithia is a fine diuretic, but long administration will not only cause nausea, but its effect direct upon the tubules of the kidney will cause some irritation therein. Thialion seems to possess the properties of soothing and healing the inflamed parenchyma of this organ. In acute parenchymatous nephritis thialion acts most admirably; in short it reduces the congestion and easily puts into solution any excess of salts that may be in the blood in a loose state. In these cases the liver is never forgotten. In interstitial nephritis thialion may be relied upon. While in amyloid infiltration nothing seems to give such fine results.

Renal Colic. A few days since, I prescribed thialion in a case of renal colic and the effects were magical. My success up to the present time has been more than I expected. I have yet to find a case that this preparation has failed to give relief. Within the *past thirty days* I have prescribed thialion in fourteen cases which I have not here mentioned.

THE RHEUMATIC DIATHESIS.

BY ROY D. MOORE, M. D., ST. LOUIS, MO.

(Abstract from the *North American Journal of Diagnosis and Practice*, September 20, 1899.)

Everyone who has prescribed for this unfortunate class of patients is well aware of the inefficacy of many of the vaunted remedies for relief. The iodide of potassium has long been regarded as possessing merit in this direction given in gradually increasing doses, but how many cases fall to our care that receive the least benefit from this agent? Indeed, in a very large proportion of cases iodism comes upon the scene, and renders further use of the iodides impossible. In such cases the kidneys become involved in the systemic disturbance, and the evidence of morbus Brightii becomes apparent. Hot baths are indicated in these cases to produce a free diaphoresis, and under these circumstances I am in the habit of prescribing thialion in teaspoonful doses every four hours in a half glass of hot water; the benefits derived in chronic cases such as herein described from the use of thialion cannot possibly be equalled from any other preparation at present in use. In the first p'ace, thialion acts most favorably upon the liver, the organ seems to take on increased secretive action, the unpleasant gastric oppression becomes at once ameliorated, the eructation of food stops, and the tongue becomes gradually cleansed of its bilious coating. Simultaneously with the improvement in this direction the alvine discharges become a golden color so characteristic of healthy stools, indicating the free admixture of the bile, and the appetite craves for food. So far as the local effect of thialion on the swollen joints, the first improvement manifested in this direction is the relief of the intense pain, this generally follows about the second day. The patient then notices that there is a feeling as if the affected joint were becoming smaller, the skin becomes wrinkled, and a general improvement sets in most gratifying to all parties concerned in the case.

I desire especially to call attention to thialion on account of its remarkable therapeutic properties in chronic rheumatism: as is a well known fact, the profession of medicine is flooded with a long line of vaunted specifics, but by far the majority have been weighed in the balance and found wanting as to the results claimed. Not so with thialion, however; under its influence, it is truly surprising how an otherwise intractable treated case will improve

under its continued use. Thialion is a laxative salt of lithia; it is prepared exclusively for physicians' use. Before dismissing this subject I desire to say that I have also found thialion a most valuable aid in the treatment of chronic malarial poisoning on account of its well marked stimulating influence upon the hepatic cells. In these cases it should be prescribed in tea-spoonful doses in a teacupful of water, hot, one hour before each meal. This plan of treatment in no wise interferes with the administration of other agents, indeed the use of quinine will be productive of far better results while the patient is taking thialion than under any other circumstances. As we all know, many of these cases we think require a little mercurial cathartic, and yet we feel an uneasiness in the case of the aged to give even a small dose of calomel or even blue mass, in such cases thialion will fully take the place of the mercurial, and has the advantage of being entirely free from every disagreeable property. The influence exerted upon the bilious state by thialion stamps its efficacy at once as a reliable agent to use in a long line of diseases dependent upon hepatic inactivity. In conclusion I desire to state that I have received such highly satisfactory returns from thialion, I cannot hesitate to express my views to my professional brethren, believing that others may have their attention called to something that will prove a friend in need.

FUNCTIONAL CONSTIPATION AND ITS TREATMENT.

BY A. J. JENKINS, M. D., BUFFALO, N. Y.

(Abstract from *Interstate Medical Journal*, October, 1899.)

When Nature calls at either door,

Do not attempt to bluff her,

But haste away, at night or day,

Or health is sure to suffer.

"Mrs. A., American, at 40, married, no children, consulted me in reference to obstinate constipation, from which she said she had suffered for many years. She had run the gamut of a long series of patent medicines, pills of various makes, and had received treatment at the hands of a number of physicians without getting anything more than temporary relief. As a rule the several treatments left her in a worse condition than before. At the time of her first visit the bowels did not move more than twice a week, and then only by the use of large enemas. From her description of the stools, it was quite evident that only the rectum was emptied by these evacuations, and room was made for the full contents of the colon above. She was a large woman, weighing 180 pounds, had a sallow skin and a headache severe in character, two or three times a week. She also complained of asthmatic breathing, together with painful joints of the hands and feet. Her deep brick-colored urine indicated the presence of uric acid, as well as the waste material usually found in cases of torpid liver.

I directed her to take a dose of thialion, a teaspoonful dissolved in a cup of hot water, and drink it as hot as possible each morning—and to report to me in two days. On her second visit, she said no movement had taken place, and she was apprehensive that she should take something more powerful in order to move the bowels. She was then told that thialion was not in any sense a cathartic, but was a laxative, which acted slowly but surely upon the liver, that she must continue to take the medicine as prescribed for two days more, when she should report again. She did not come to report until morning of the third day, when she said that she had had three large movements during the forenoon—such movements as she had not had for years. I told her to omit the dose next morning, and to take the medicine every other day, requesting her to call on me again in the course of a week—which she did. At that time she reported regular movements every day, especially the day on which the medicine was taken. Her headache was gone, and she felt very grateful and much better. She continued taking thialion every other day, or twice a week, for four months, and she expressed herself then as perfectly cured.

On seeing the patient last week, over a year since she commenced the treatment, she stated that about once a month she found it necessary to take a dose of thialion, but that aside from that her constipation was perfectly cured. This case illustrates the point that until

the remedy gets in its work upon the liver, we cannot expect the bowels to increase very much in their activity."

The following case is reported, and is particularly interesting as an illustration of perfect recovery from functional constipation associated with long suffering mal-nutrition:

"Mrs. D., American, at. 32, brunette, married, no children, weight 135 pounds, has been a great sufferer from childhood from obstinate constipation. Like the previous case she had spent much time and money trying to get relief from the difficulty which was evidently undermining her health rapidly. The movements occurred only about twice a week, while once each week she suffered from a severe headache which prostrated her for two days at a time, so that she could not exist out of bed in a room that had to be constantly darkened. She had liver patches on her face, yellow conjunctiva, pasty look to the skin, bad appetite, foul tongue, and all the symptoms that go with auto-intoxication and poisoning. That there was a considerable putrefaction and consequent absorption of the retained fecal mass was evidenced not only by the aforementioned symptoms, but also by a well-marked indicanuria.

Thialion was given her as in the previous case, a teaspoonful dissolved in a cup of hot water taken in the morning on arising, while at the same time she was cautioned to avoid excess in nitrogenous foods. It was not until the fifth day that she had a free movement, and then, as she expressed it, it was the most odorous stool that one could possibly imagine to come from a human being. The remedy was continued in her case every morning for a week; then every other morning for two weeks; twice a week then for a month; once a week for another month, and at the end of that time she appeared to be perfectly well. Her bowels moved freely; appetite returned; skin resumed a healthy hue, the pasty look having entirely disappeared; tongue was clean; breath nice and sweet,—in fact, every indication was present to show that the nutritive functions were finally being properly performed.

It is now two years since this patient began treatment, and she reports that by taking an occasional dose of thialion she has remained perfectly well, the bowels acting normally—movements being had every day or every other day."

A CASE OF CYSTITIS OF LONG STANDING, COMPLICATED BY CHRONIC MALARIA, TOGETHER WITH SLUGGISH LIVER AND HABITUAL CONSTIPATION.

BY J. W. WALKER, M. D. (HARV.), LOS GATOS, CAL.

(Reprinted from the *Annals of Gynecology and Paediatrics*, December, 1899.)

The following case may serve to illustrate the maxim that we should never abandon the hope of a cure so long as any remedy, compounded upon rational and scientific principles, remains untried.

The patient, Mr. R., eighty-two years of age, has suffered for several years from chronic cystitis with occasional acute exacerbation. The original cause of this cystitis was, undoubtedly, the careless (or rather the *ignorant*) use of unclean catheters. Like many elderly men he has enlarged prostate, and has been compelled for years to rely on the catheter for the evacuation of his bladder; but had never been taught the importance of keeping this instrument clean; knew nothing of the value of thorough sterilization. As a result the flexible rubber catheter which he used rapidly became foul; and its repeated introduction in this condition gave rise to an acute cystitis, which finally became chronic, and has lasted up to the adoption of the treatment indicated below.

In addition to this trouble, he suffered from chronic malaria and a sluggish liver, together with habitual constipation, which last symptom the old gentleman himself (being an enormous eater) regarded as not the least of his afflictions. He had tried so many remedies and doctors without effect and was so querulous and petulant in consequence of his advanced age, that it was difficult to induce him to take any medicine at all.

I had never before used thialion, but its composition warranted the belief that it would prove an ideal remedy for this class of disorders, while the published reports of other practitioners as to its effects in similar cases confirmed this idea. Following the suggestion given on page 22 of the pamphlet on uric acid, I combined quinine with thialion in this case, giving two grains of quinine three times a day, while the thialion was given in teaspoonful doses;

every morning dissolved in a cup of hot water. At the same time I consigned the old rubber catheters to the ash-barrel, procured a proper prostatic catheter of block tin, which could readily be sterilized by boiling, and taught the patient how to use and care for it.

The results of this change of treatment were rapid and satisfactory, both to myself and the patient. He has had no more chills, has large, regular, mushy evacuations of the bowels, and most important of all, the amount of urine voided has greatly increased, while the former purulent, mucous and bloody discharges have totally disappeared. He is so delighted with his improved condition that he says he feels twenty years younger, and what is most remarkable of all, for the last three days he has been able occasionally, for the first time in twelve years, to empty his bladder in the natural manner, without the use of the catheter.

This case is certainly a convincing proof of the efficacy of thialion in this class of cases; and how many such there are, in the hands of my brother practitioners all over the country, which might be cured as this has been, and as easily!

BACKACHES: THEIR CAUSATION AND TREATMENT.

BY H. P. MANSFIELD, M. D., GEORGETOWN, CONN.

(Abstract from the *Canadian Journal of Medicine and Surgery*, Toronto, Canada, January, 1900.)

The backaches referred to in this article comprise what has long been classed as lumbago, or myalgia lumbalis, and should not be confounded with disease of the spinal cord, with abscess, nor with certain rectal or uterine disorders. Diseases of the kidneys, however, and passages of renal calculi through the ureters, as in so-called "crick in the back," are included under this heading, inasmuch as they both may be traced to a certain well-known toxic agent as the common etiological factor, the writer believing that fully nine-tenths of the backaches which afflict mankind are merely local expressions of a general uricacidæmia; or, in other words, that they are the inevitable result of the deposition of uric acid tophi in and about the various connective tissues in the region of the back.

J. B., American, at 32, hat finisher by trade, had suffered almost constantly for two years with "backache." He had tried various internal remedies and applied porous plasters innumerable, gaining only temporary relief. He complained of occasional attacks of vertigo and some sleeplessness, but otherwise enjoyed perfectly good health. Careful examination revealed little of consequence aside from a strongly acid, brick colored urine, containing the usual deposits indicative of a sluggish liver. Upon questioning him regarding his occupation it was learned that he was obliged to stand on his feet at the bench in a hot room from morning till night, with no coat on, and usually exposed to cold draughts from open windows. He also admitted that he considered it his duty, as a workingman, to eat meat three times a day and had rarely failed to do so, partaking but sparingly of other foods.

It was evident that this patient was a victim of uric acid diathesis, the back having been selected for the deposition of the toxin owing to the great strain put upon its muscles and its frequent exposure to cold draughts. Teaspoonful doses of thialion were administered every three hours the first day until a free bilious passage from the bowels was produced, which occurred soon after the third dose. For two weeks thereafter a dose was given in a glass of hot water every morning upon rising. As the litmus paper then indicated a distinctly alkaline urine, the medicine was omitted every other morning for another fortnight, at the end of which time it was given up altogether, the patient having declared himself cured. Three months have since elapsed, and although this man has attended to his usual work at the bench, the pain in his back has not reappeared. It should be stated, however, that he has eaten less of meats and been more careful in regard to exposure.

The foregoing case is a type of hundreds of others to be met with daily in most manufacturing towns of old New England, and has been given here in brief as a fair sample of seventeen other sufferers whom the writer has successfully treated in precisely the same manner. Another set of cases which is often met with occurs among those of the middle and higher walks of life, people who are prone to eat too well and yet are of sedentary habits—professional men, retired business men, bankers, teachers, clerks, etc. The following case is illustrative of this class:

S. H., American, stock speculator, set. 48, five feet ten inches in height, of fine physique, had always enjoyed perfect health up to eight years ago, when he retired from active business career and began life "on the street," from which time he has complained more or less of backache, the pain over the lumbar region during the past year having been almost constant. Upon questioning him the fact was elicited that he was wont to indulge in late hours, game suppers and the "flowing bowl." His urine, at times, he said, resembled "red paint," and occasionally scalded. His treatment had consisted of iodide of potash, belladonna plasters and Turkish baths, none of which had afforded him relief. Like the case above reported he was at once put upon teaspoonful doses of thialion to be taken in a glassful of hot water every morning upon rising. On the third day a large mushy movement of the bowels occurred, which was so offensive in odor that the patient at first refused to continue the medicine. On being informed, however, that it was the best thing that could have happened he was finally persuaded to resume the treatment, from which hour he began to improve steadily. Three weeks later he reported himself cured of his backache, although he continued to take the medicine twice a week for some time after, owing to its delightful effect on his bowels.

OBSTINATE HEADACHE, THE WOMAN'S BURDEN.

BY S. GREEN, M. D., SANDY HOOK, CONN.

(Abstract from the *Columbus Medical Journal*, January, 1900.)

Mrs. C., American, 39 years old, five feet, seven and one-half inches tall, weighing 110 pounds, the mother of six children, consulted me with regard to persistent, chronic, occipital headache. These headaches came on sometime during the day, generally during the afternoon, commencing with pain at the occiput—radiating, sharp and neuralgic in character. Still, as she described it: "It's inside the cranium, Doctor." This woman has borne children rapidly, two of them were borne within thirteen months of each other. Her husband was a clerk in a dry goods store, and she had to bring up his family on \$15 or \$16 a week. This, of course, necessitated hard work for her—work from morning to night, the work never done for the woman. She was married when but seventeen years of age and her children were all born before she was thirty. Careful examination failed to reveal the fact that she had ever done anything to prevent conception. These headaches dated back to a time shortly after she had given birth to her fourth child, and during her last pregnancy they had increased in severity and frequency, while at the same time she noticed a puffiness in her limbs with a general tendency to bloat. This was due, so she was told, to the fact that her water was wrong in some way. The headache generally came on a few days (nearly always two) before the flow of the menstrual period. Before she commenced menstruating, a day of persistent pain was present, in character much the same as we get where a woman has stenosis or a flexion of one kind or another. The attack lasted usually from twenty-four to thirty hours, and absolutely incapacitated her for her work. It took her a long time to recover from the effects of one of these exhausting attacks. Further examination reveals the following: Obstinate constipation of long standing; furred tongue; sallow skin; listless eyes; general facial expression one indicating discouragement; a woman subject to fits of melancholia; water high colored with brick dust deposited at the bottom of the vessel. Vaginal examination fails to reveal anything abnormal about the uterus. When placed in the Sim's position and a careful examination made by using the Sim's speculum, everything seemed to be normal. She called my attention to some icteric spots over the body. On the left arm was a small patch of eczema, which she said had existed for four or five years, resisting all kinds of treatment. Latterly she notes that her hair is falling out rapidly, and at the time of her first visit it was very, very thin. The spleen is enlarged, probably due to the fact that she had malaria several years ago. The lower border of the liver projects an inch or more below the normal line. Veins stand out prominently on the forehead and hands. Altogether it would seem that in her case, where from fast childbearing, overwork, etc., the uric acid, which normally should have been carried out of the system through the bowels and urine, had been retained until she reached her present deplorable condition. She had received treatment at the hands of so many doctors, had taken so many different kinds of medicines to

effect a cure, that when I suggested going to the hospital for treatment, it revealed the fact that she was discouraged in the first place, and did not care to entertain for a moment the idea of entering a hospital. Later I saw her husband and advised him to allow her to go into the hospital for two weeks, explaining to him the necessity in her case of complete rest, good care and nursing, the right medicine, medicine administered by trained hands, given in the best way and at the proper time with regularity, showing him how impossible it was for these conditions to be met in her home. He finally consented, and she also consented, and the night she went to the hospital I ordered she be given a bath at a temperature of 104, for fourteen minutes, when she was taken and put in the hot pack with seven blankets. Here she remained another fourteen minutes, when she was to be massaged after which she was rubbed down, and just before going to bed she was given the alcohol rub. She was given a teaspoonful of thialion dissolved in a cupful of hot water, into which a piece of lemon peel had been squeezed to remove the flat taste. This she drank down as quickly and as hot as possible. In the morning a similar dose of thialion was administered, and about fifteen minutes after breakfast a desire to stool was apparent, and a large mushy movement was the result. Thialion was given again in the evening in a like manner, and as a result she had another large stool during the night. A general massage was ordered for every day. On the second day the movements from the bowels continued, the third stool indicating bile in large quantities with stinging around the anus. Thialion was continued only once a day. She was given during the whole time good nourishing food with plenty of milk. After the sixth morning she was given a dose of thialion as before, but we found out that it agreed with her much better when taken in the evening, just the last thing before going to bed, so it was ordered given in this way. Improvement now commenced, and from then on till the end of the two weeks it was steady and marked. The bowels became not only regular in their movements, but the evacuations were natural in color, resembling much the stool of the infant. The appetite returned; eczema disappeared from the arm at the end of the tenth day without any treatment whatever. Spirits returned, and when her two weeks were up she went out of the hospital a new woman. At that time she was taking but one dose of thialion twice a week. She now takes a dose of thialion once a week or once in two weeks, just as she finds she requires. But she is absolutely well; attends to her wifely duties; eats well; sleeps well, and has become pregnant again.

LITHÆMIA.

BY J. W. P. SMITHWICK, M. D., LA GRANGE, N. C.

(Abstract from the *Southern Medical Journal*, February, 1900.)

This condition, which is the result of imperfect oxidation, is usually brought on by excesses in eating and drinking, and is a frequent forerunner of gout. These excesses pervert the functions of the different organs, more especially the digestive organs. The liver suffers to a very great extent by having the work of other organs to perform. This results in imperfect work on its part—imperfect oxidation—and the accumulation of an excessive amount of uric acid, a more lowly organized product than urea, which is normally formed. If this condition is allowed to progress, in the course of time, the blood becomes surcharged with uric acid, and later on there appears all the symptoms of irregular gout, or it may result in contracted kidney.

The patients usually present themselves complaining of dyspepsia in one or all of its forms. There are acid eructations, heart burn, gaseous distension after eating, coated tongue, bad taste in the mouth, breath heavy and foul smelling, and constipation is usually present. The skin is muddy and there is great deal of headache and aching of the limbs. The liver is enlarged and tender on pressure, due to congestion. The urine is scanty and high colored, and of a high specific gravity. On standing, urates and uric acid are deposited. Micturition is frequent and scalding. Patients complain that they never feel entirely well, though not sick enough to go to bed; that they have no energy for anything whatever.

Active purgatives should be avoided, only gentle laxatives being used. Sodium phosphate is recommended and is often used with good results. Colchicum has also been used. The waters of the various lithia springs have long been in use and are found to be very beneficial, but

their use must extend over long periods of time and large quantities consumed. It has been proven time and time again, that lithia has a greater neutralizing power, weight for weight, than any of the other alkalies. To obviate the long periods of administration most practitioners use some one of the salts of lithia, and it was the custom of the writer to use the citrate until the appearance of thialion, the laxative salt of lithia. This drug acts in a four-fold manner by gently relieving the portal circulation, stimulating the flow of bile, aiding in the elimination of the excess of uric acid, increasing the peristalsis, thereby relieving the constipation and increasing the flow of the urine. Usually the administration of thialion is sufficient to overcome the trouble entirely.

Of course the same cause will produce the same result the second time and sometimes a patient returns, saying that he has been benefited but little if any by the treatment. After careful inquiry, I find, as an invariable rule, that he has lapsed into the same old habits, after stopping the treatment, which bring on the trouble the second time. This treatment never fails to dispel the symptoms the second and third times.

I herewith append a few typical cases taken from my case book.

CASE XI. A young man, 26 years of age, to all outward appearances enjoying perfect health. Had been suffering from indigestion for some time. Had acid eructations, coated tongue, foul smelling breath, bad taste in mouth on rising, was troubled very much with gaseous distension of bowels at all times, bowels were constipated. Suffered very much from headaches and aches in all parts of the body. I put him upon teaspoonful doses of thialion in a glass of hot water one hour before meals. This gave him complete relief by dispelling all the above symptoms and regulating the functions of all the organs of the body.

CASE XIX. This patient was a married woman, 36 years of age. Had several children and was complaining of indigestion in all its forms, as well as "womb trouble" in all its forms. I made a careful vaginal examination and found all the parts normally located, but very much congested and tender on pressure. The liver was swollen and tender. She was very nervous and complained of insomnia, vertigo and very great weakness. I put her on thialion, and the tonic, the formula of which is given below, and in one week's time she reported herself feeling better than she had in five years before. I advised her to keep up the treatment for two weeks longer, and then report. At the end of that time she came and I hardly knew her so much had been the change. She has since been well, and at the present time is thoroughly well, two years from the time I first saw her.

CASE XXII. A young man, school teacher by profession, was troubled with indigestion, constipation, and all the attendant ills. The nervous manifestations were very marked. I ordered a teaspoonful of thialion in a glass of hot water after meals, and the following tonic:

R Acid. hydrochlor. dil.
Tinct. nuc. vomic., aa $\frac{3}{2}$ j.
Tinct. gent. comp., $\frac{3}{2}$ iv.

M. Sig. Teaspoonful in a little water before eating.

The improvement was marked from the beginning, and in less than two weeks he reported himself as entirely well. I advised another week's treatment, which he took, and has since enjoyed the best of health, having gained twenty pounds.

INCONTINENCE OF URINE IN CHILDHOOD AND ITS TREATMENT.

BY WILLIAM C. WILE, A. M., M. D., DANBURY, CONN.

(Abstract from the *Massachusetts Medical Journal*, February, 1900.)

Though enuresis is occasionally met with in adult life, yet, for all practical purposes, it may be considered an affection peculiar to childhood, rarely occurring after the age of puberty. Before the completion of dentition, incontinence is not looked upon as a disease, but is considered a normal condition. It is not surprising, therefore, that involuntary passages of urine should occur mostly among ill-nourished, ill-conditioned children whose muscular fibres still remain weak and undeveloped; or among others comparatively strong, but whose urine for certain reasons has become unusually acid and irritating in character. It is to the treatment of these latter cases that we wish to direct attention here, inasmuch as in this advanced

age of civilization, when children are permitted to gorge upon sweets and meats, such patients are becoming more common every day—due to uric acid toxæmia.

There have been many preparations presented to the medical profession, some of which are effective as uric acid solvents, and others not, but none of which act effectively also upon the liver, stimulating cellular action, except the new laxative salt of lithia, thialion. The thorough cleaning out of the hepatic cells produced by this remedy is in some cases very striking, as indicated in the character of the stools, which become not only "mushy" in consistency, but about the third day are so positively disgusting in odor (owing probably to the "cleaning out" process referred to), that the little patients' parents have sometimes refused to continue with the remedy, believing that it is producing some disease "inwardly."

While thialion is an agent not particularly æsthetic in effect, yet its therapeutic results in these cases are satisfactory and pronounced. Not only is this seen in the character of the passages from the bowels, but also that from the bladder, the urine becoming rapidly less acid and irritating, and finally alkaline. When this occurs the medicine is usually omitted for a day or two, or until the litmus indicates that the neutral point has again been passed, when it may be resumed and continued until recovery. As an illustration of the potency of this remedy and the practical results which may be obtained by its administration, and to evidence that incontinence is often but the local manifestation of a general uric acid poisoning, the following cases are submitted here, in which this alkaline agent has been used with exceptionally gratifying results:

William D., age 12, was brought to the office for treatment March 10, 1899, his mother reporting that he had "wet the bed" regularly every night for the past five or six years. During a great portion of this time, the usual remedies had been prescribed by the family physician—belladonna, iron, ergot, etc.—affording only temporary relief. The patient's general health had been good, until recently he had begun to grow irritable and complain of dizziness and headache. His skin and mucosæ were pale, and bowels inclined to costiveness. Upon further questioning, it was learned that the patient had always been extremely fond of "sweetmeats," and, owing to the good nature of the father, had usually succeeded in getting his "fill," regardless of maternal restrictions. His mother had already suspected that this indulgence was a causative factor in the case, and was much pleased to learn that her opinion was shared by the new physician. Directions were at once given as to the diet, and thialion administered in the usual way; i. e., half a teaspoonful in a cup of hot water every morning upon rising. The treatment was continued in this way for the first month without much change in the patient's condition, except that the bowels had become regular, while the headache and dizziness had practically disappeared. It was noticed, too, that the quantity of urine voided during the night was gradually diminishing. At the end of another month a marked improvement was manifest, the normal color of the skin having been regained, while the bedding in the morning was found to be but slightly soiled. On June 15th, three months after the commencement of treatment, the mother reported her son cured, but was advised to continue with the medicine for another month, reducing the dosage to a third of a teaspoonful every other day. Nothing further was heard of the case until the 16th of December, on which date the mother called and stated that the boy had not relapsed into his former habit but once during the preceding six months, a mistake which she attributed to a hearty meal taken just before retiring.

A case even more troublesome than the above, was that of John D., a young man 18 years of age, who reported that he had "soaked the bed" nearly every night since he could remember, wetting through sheets and mattress (as well as blankets placed to absorb the urine). He was first seen two years ago, having, at that time, been treated unsuccessfully by several different physicians. I administered the usual remedies for two or three months without benefit, and the patient was soon lost sight of. Last September he again appeared for treatment, for another trouble, and, being asked regarding his old complaint, he stated that he was "just as bad as ever," and had given up all hopes of obtaining relief. An examination of his urine revealed a considerable quantity of urates and a high degree of acidity. He was finally persuaded to try a new course of treatment; and, having first been advised as to his diet, was at once put upon thialion—a teaspoonful three times a day. This heroic dosage was

continued for a week, and then reduced to a teaspoonful every morning upon rising. The young man followed out directions carefully in regard to his diet, and took the medicine regularly for two months, at the end of which time he called at the office and reported himself cured. Three months have since elapsed, during which time he says he has retained his urine at night "as well as any one." He is of a nervous temperament, and his habits are of such a character, that, were there any doubt as to his being entirely cured, the fact would have offered itself long ago. The recovery of this case in so short a time is in many respects remarkable, and can be explained by the writer only on the grounds that the patient had for a long time been a victim of the uric acid diathesis. His bladder, too, was doing much of the work of the bowels. His stools had always been hard and dry, until taking the thialion, when they immediately became soft and "mushy" in consistence.

TWO TROUBLESOME CASES CURED, ONE OF CHRONIC RHEUMATISM AND ANOTHER OF CONSTIPATION.

BY D. C. REES, M. D., LA BELLE, MO.

(Reprinted from *The Southern Practitioner*, February, 1900.)

The following cases in which I used thialion, seem to me worthy of recording. There can be no question of the therapeutic value of this drug in a wide range of cases—in fact, in every case where the malady is caused by an excess of uric acid in the blood. It works in such a quick and effective way that it is a revelation to physicians who are wedded to the older methods. Its action on the liver is of so marked a character that I am prone to believe that, if intelligently used, and the treatment started with the understanding that *it is not a cathartic*, but a laxative, which increases peristalsis of the bowels, stimulates gently the liver to action, increases markedly the flow of bile; it will take the place of and entirely supersede the use of calomel.

Mrs. C., American, 53 years of age, large and fat, consulted me in regard to rheumatism of her hips, back, knees and ankles, of long standing. She was so lame that she was compelled to use a cane in going about the house. Like all, or nearly all, fat women of full habit, she was constipated, and the liver was very torpid and slow in its action, leaving a coated tongue, headache, and all that train of symptoms that follow a sluggish liver. I commenced the treatment by giving her a teaspoonful of thialion dissolved in a cup of hot water three times a day, one hour before meals. At the fifth dose very free evacuation and the characteristic "stinking stool" took place. After this the improvement was rapid. After the ninth dose the thialion was reduced to a dose morning and night for three days, and afterwards to once a day, and that in the morning on rising.

The effect was like magic. In two weeks the cane was thrown away, and she attended the "street fair" at Quincy. I saw her then and she was very sure that she would have a relapse for her temerity, but she did not, for the next day she was attending to her household duties as usual. Yesterday I saw her son (seven weeks since I first treated her), and he said that she was singing about the house as happy as a lark, and had gotten for him that morning an early breakfast so that he could open his drug store.

Miss N. has two brothers who are physicians, has been ailing for eight years, she is now 29. She had obstinate constipation of long standing. The strain at stool was very severe, and if she did not take something, days would intervene between the stools.

I commenced the treatment by giving a teaspoonful of thialion three times a day, one hour before meals, in a cup of hot water. This I kept up for one week, after which one dose a day either in the morning on rising or taken the last thing before retiring at night, had the desired effect. She began to improve after the first three days. She is doing her first general clothes washing for the first time in eight years, and I consider her entirely well after three months since first commencing treatment.

TYPHOID FEVER AT ONE HOSPITAL DURING SEVENTY-EIGHT YEARS.

BY CHARLES E. PAGE, M. D., BOSTON, MASS.

(Abstract from *Gaillard's Medical Journal*, February, 1900.)

The conclusions reached from the study of the records of the Massachusetts General Hospital for the past seventy-eight years,* according to the report of Dr. R. H. Fitz, of Boston, are as follows:

1. The treatment of typhoid fever does not differ in essentials from the principles laid down in 1839.

2. The average mortality from this disease has not materially changed from the days of active treatment with emetics, purgatives, venesection, antimony and calomel down to the present time.

3. Intestinal hemorrhage, perforation and relapse, upon the whole, are quite as frequent now as at any period in the history of the disease.

Surely this presentation of the status concerning the treatment of typhoid fever is in itself sufficiently disheartening, and all the more so in view of the fact that Dr. Fitz seems to have no remedy to offer for the evil, and is able to suggest no marked improvement in the treatment for a disease that in this country alone destroys upwards of 50,000 lives annually, a money loss from sickness and deaths amounting to about sixty-four millions of dollars.[†]

Thus far I have made no reference to drugs in the treatment of typhoid fever, except to condemn the routine employment of medicinal antipyretics, whose chief virtue seems to be, as Dr. Baruch has so aptly said, "that they enable the typhoid fever patient to die with a fairly normal temperature," and to indicate that such drugs as calomel, for example, or other violent purgative, will never be required if a strictly water diet be held to until we have reason for concluding from the appearance of the tongue, condition of the stomach and bowels, together with a genuine hungry appetite,[‡] that digestion and assimilation will follow the ingestion of solid food.

But it usually happens that long before the physician is called to a case of typhoid fever, and the same is true in rheumatic fever, scarlet, in short in all severe illnesses, the patient has been fed *ad nauseam* and has his stomach and bowels crowded with putrefying food-substances requiring to be gently moved along and out. When such a case presents itself to me, it has of late been my practice to employ a new drug which I have used frequently with satisfactory results in other forms of disease, notably gout and rheumatism, but which I have never seen recommended as having any place in the treatment of typhoid fever, *viz.*, thialion. A teaspoonful (for an adult) in a half-cupful of moderately hot water often suffices. With its known effects as a gentle laxative, I do not see why this preparation, so highly extolled in the treatment of diseases believed to result from excess of uric acid in the blood, should be wholly confined to the treatment of these disorders. While I would sooner be deprived from using any medicament in our *materia medica* than to be withheld the entire control of the alimentation of the patient, still in cases such as I have cited above, and as a preliminary to therapeutic fasting, a dose or two of thialion is in order.

For years past I have sacredly avoided the use of calomel and other drugs, noted for "stirring up the liver" in what might be termed a bulldozing fashion; but thialion seems to act favorably both on the liver and kidneys, aiding in the work of elimination.

Once the alimentary tract is cleared of its fermenting matters, it should be let severely alone, except so far as concerns the profuse supply of fresh, soft water, which should often be urged (though never to his inconvenience) upon every fever patient. It will generally be craved; but in some cases, or at some stages, moderately hot water, perhaps with a few drops

* A paper read before the New York State Medical Association, Oct. 25, 1899, and printed in the *Boston Medical and Surgical Journal*, of Nov. 23, 1899.

[†] Estimate of Prof. Victor C. Vaughan, of the Michigan University.

[‡] After a few days' fast, or at any rate when the proper time for feeding shall have arrived, a piece of stale graham bread will taste delicious to the patient, and a moderate sized piece may be allowed, say twice a day, each mouthful to be chewed in a most thorough manner. Even here, the patient should *sacredly* regard the rule to "always rise from the table hungry!"

of lemon juice (occasionally), will be more acceptable. It is essential to maintain the normal fluidity of the blood as nearly as possible, and water is the only liquid indicated for this purpose. To body perishing from drought, water is the most nutritious of all foods. In fasting patients the bowels are normally closed and should so remain until feeding is resumed when they will move naturally in good time, without artificial help, other than an enema of a cupful or two of cold water in case of a collection of fecal matter difficult to expel.

LITHÆMIC CYSTITIS AND ITS TREATMENT.

BY G. WIGHT, M. D., BETHEL, CONN.

(Abstract from the *North Carolina Medical Journal*, November, 20, 1899.)

In the past, our treatment of these cases has been empirical. We have treated the symptoms. We have relieved pain. We have applied to the affected surface various medicaments to abort or reduce the inflammation; but we have never removed the toxin itself, that which caused and will keep up the inflammation indefinitely. It is manifestly our duty, when confronted with a case of chronic cystitis, the symptoms and history of which point toward lithemia, to prescribe at once an effective uric acid solvent. For this purpose the laxative salt of lithia, thialion, is now being recognized as one of the most efficient therapeutic agents at our command. Its great advantage in this class of cases is attributed partly to its antilithic effect and partly to its stimulating action on the liver, producing outward osmosis and free biliary discharges from the bowels. In the case given below the effect of the remedy was so immediate and gratifying that it is cited here as a point in favor of the uric acid theory of causation and treatment of the disease under consideration.

Mrs. B., American, at 40, married, with two children, was a sufferer for many years with chronic cystitis. She had become broken down and very thin, evidencing an abnormal condition that required instant relief. Her principal complaints were backache, sacral pain radiating upward and backward from the perineum, and a desire to strain after the act of micturition as though the bladder was not fully emptied. Indeed, the tenesmus was at times so great as to leave her quite exhausted for a number of minutes. She urinated frequently during the day, and was obliged to get up often during the night. The resultant loss of sleep inducing finally a state of extreme nervousness. Jolting or riding, too, caused severe pain over the region of the bladder, and she was obliged to confine herself largely to the house.

The treatment consisted of teaspoonful doses of thialion administered in half a glassful of hot water three times daily before meals. This was kept up pretty regularly during the entire treatment, the patient being instructed of course to diminish the dose if the bowels should become too loose, or the litmus paper indicated a urine too strongly alkaline. She was advised to drink much milk and to partake but sparingly of nitrogenous foods.

The result of this simple method of treatment was all that could be desired. After taking four ounces of the remedy the improvement was most marked in every respect. She was rarely obliged to get up at night, the backache disappeared and the constant desire to urinate became a thing of the past. She could ride slowly, too, in a carriage without experiencing any distress. In this manner she continued to improve for another fortnight, or until she had taken the second bottle, at which time, notwithstanding she had been ill for many years, her general and local condition had reached such a favorable stage as to require no further treatment.

HOSPITAL REPORT.

ASTHMA, INTERMITTENT FEVER, MASTITIS, VARICOSE ULCER, PREPARATION OF THE PATIENT FOR OPERATION.

BY R. K. LANGSON, M. D., GORDON HOSPITAL, CHADRON, NEB.

(Reprinted from the *Oklahoma Medical Journal*, Guthrie, O., November, 1899.)

I have now been using thialion for two months, and it has filled a want I know every country doctor will appreciate. We all have more or less chronic asthmatic patients that tax our skill and patience to the utmost, and, at the best I have found only indifferent success in using the different forms of treatment now in vogue—I mean those old cases that have been

the rounds generally; from having the sphincter stretched to inhalations of stramonium fumes. Thialion is indeed a jewel. I have now used it in twelve cases with the most gratifying results, and have found out that the more strongly acid the urine, the better and quicker results one obtains. It should be given in teaspoonful doses in a glassful of hot water the first thing on rising, and the last thing before retiring at night and kept up until the reaction of the urine is neutral or slightly alkaline.

I have also used it in two cases of intermittent fever in conjunction with quinine, both cases recovering in four to six days that ordinarily will take two weeks in this section. It has a profound action on the liver, and, I believe, in this way enhances the action of the quinine.

I have treated a great many cases of rupture by the injection method, a report of which you will find in the November number of the *Philadelphia Medical World*. Since writing that article I have operated on nine new cases, in six of which I administered thialion three days before the injection, and in each of these cases there was wanting the rise of one-half a degree of fever that usually follows. Now, I am not quite sure that the thialion was the real cause in preventing this, but believe it was, for it happened in the whole series of the six cases in which thialion had been used, while in the three cases where it was not used, I got the usual rise in temperature. I cannot believe it was merely coincidence, and shall therefore follow it up and report later.

I find that in every surgical case (especially chronic) it is an excellent thing to give thialion a day or two before the operation and I expect to report in a few weeks the results obtained, when I hope to be in a position to say exactly how much is due to this treatment. One case, however, I wish to note now. The wife of Mr. W. J. B., druggist, Hemingford, Neb., entered the hospital two weeks ago, suffering from the worst case of mastitis I ever saw. She had pyemic poisoning from the absorption of the retained pus in both breasts. Temperature 103, and all in all, the general condition of this woman was about as bad as it is possible to get in with this trouble. Today she goes home entirely well, and the whole treatment consisted of thialion given in hot water, a teaspoonful every morning on rising and every evening on going to bed, in connection with the application of steam coils to the breast. Ordinary cases of this character would hardly be out of danger by this time, but she is cured today. The urine in her case contained blood and hyaline casts, and 11 per cent. of phosphates, notwithstanding which, it was very acid. Mrs. B., two years ago had an attack of the same trouble, only with one breast, and she thinks it wonderful to have recovered so quickly this time.

Mrs. C., age 68, Rapid City, S. D., came to the hospital June 30th with the following history: Some eighteen years ago she had pneumonia, followed by typhoid fever. When she was able to get up she found that the veins of the left leg and foot were very much enlarged, and that every few nights she would have severe asthmatic breathing. About one year after one of the veins ruptured, and she had a small ulcer on the left ankle for about three months. All this time her "bad breathing spells," as she calls them, got more frequent and worse. Five years later the leg gave her much trouble, and after being bloated for some months, another ulcer appeared that resisted all treatment.

Hospital report of case as follows: Mrs. C., aged 68, brunette, nervo-bilious temperament, weight 181. Family history negative. One sister, she thinks, died of scrofula. Chest measurement, just above breasts, 38 inches, forced inspiration; 36½ inches, normal inspiration. Respiration over most of right lung except apex; left lung all mucous rales, and point of left apex seemed consolidated. Much muco-purulent sputa. Microscopical examination showed no tubercle. Both lower limbs very oedematous, that of the left more than the right. Varicose ulcer 2½ inches long by 2 inches wide, just over the external malleolus and very offensive.

Urine loaded with urates; specific gravity, 1.016; reaction, very acid. Color, dark; odor, very putrid. I should have said for the last three years she could not lie down, but slept always propped up in a chair.

Treatment: Charcoal poultices on the ulcer for three days, changed every twelve hours. Leg elevated and massaged one hour daily. After third day boracic acid sprinkled on ulcer, dressing changed daily. Foot and leg bandaged from toes to hip.

Internal medication: Teaspoonful of thialion in glass of hot water three times daily for one week, then twice daily.

On July 26th she was discharged cured.

Remarks: After the first day using thialion, the stools for a week were so offensive that we had to use our formaldehyde burner. This condition gradually passed off and the passages then remained mushy and natural (first time in years). The sixth night the patient for the first time in many years slept lying down. While the expansion and contraction of the breast did not change, there was complete disappearance of all dyspnea. The ulcer was nicely healed, and I copy from part of a letter received a few days ago, from the patient. "I am still doing well and the bloat is almost out of my legs. The sore is all right, and I sleep almost all night. Shall I keep on using the salts (many call thialion salts) twice a week?"

In the hospital report the heart was found to be normal, but very feeble; pulse 61. I could notice no difference when she left the hospital. This is a very good example of results in old chronic cases, that before thialion came out I was at my wits end to do anything for. One thing I have omitted to state is that she had five steam baths, of twenty minutes, each, while here.

ALBUMINURIA IN PREGNANCY; ITS TREATMENT.

BY E. M. SMITH, M. D., BRIDGEPORT, CONN.

Vice-Pres., Danbury Medical Society.

(Abstract from the *Peoria Medical Journal*, March, 1900.)

Lithia, in conjunction with a laxative alkali, such as we find in the well known combination thialion, would seem theoretically to meet the indications for this disease more fully than any other remedial agency, and, besides, has been practically tested by the writer in the following two cases with marked success. It would seem, too, if the uric acid theory be correct, that the same remedy must prove effectual as a prophylactic agent in these cases, preventing the formation of urinary toxins by supporting the action of liver and bowels, and freeing the kidneys of much of that additional work so commonly attendant upon the pregnant condition.

The first case to which allusion has been made was that of Mrs. G., a primipara, æt. 24, who had reached her seventh month of pregnancy, and when first seen complained simply of dizziness and headache. Acetate of potash was prescribed and the patient was not seen again until the following week. On this occasion her condition was at once recognized to be more serious and a careful examination was instituted. Questioning elicited the fact that the patient's bowels had not moved in four days, that she suffered from insomnia, loss of appetite and occasional indistinct vision. There being some anasarca of the feet and limbs, the urine was examined and found to contain a considerable quantity of albumin and evidences of casts. The diagnosis being no longer doubtful the patient was at once put upon thialion in teaspoonful doses every four hours, the first day, until a movement of the bowels was effected—a large mushy stool appearing soon after the third dose. Thereafter a teaspoonful was administered in a glassful of hot water every morning upon rising.

Improvement in this case was marked almost from the very outset. The puffiness of the feet disappeared, headaches were less frequent and the bowels moved with some degree of regularity. More urine, too, was being voided than at any other time during the pregnancy, and at the end of a week after the commencement of the treatment the albumin had entirely disappeared. The patient was delivered less than two months afterward of a healthy male child, from which operation she proceeded to a speedy and perfect recovery.

The second case was one of threatened eclampsia. The patient, a delicate young woman eight months pregnant, had already suffered from what her husband styled "spells" or "fits." She would be sitting quietly at table reading or sewing, when suddenly she would straighten out and begin to jerk her limbs in a convulsive manner, her face being drawn as if in pain. This singular condition would last for about a minute, when the patient would resume her former attitude and state, but without any clear recollection of what had occurred, and remaining for a short time in a somewhat dazed condition. She had complained previously of severe frontal headaches which she attributed to constipation. Her urine was scanty, strongly acid and high colored, and scalded considerably in its passage. There were no evidences of albumin, although uric acid crystals were discovered in abundance. The treatment adopted was pre-

isely like that already described in the preceding case, while recovery was equally prompt and decisive. Two months have now passed since the patient's confinement, which was normal, and she is gaining in health and strength, besides having had no return of her spasms. He continues, however, to take thialion at intervals to prevent the recurrence of constipation and the attendant headaches.

In both of these cases strongly nitrogenous food was interdicted, and a milk diet substituted. The last patient, too, admitted after much questioning, that her urine had not commenced to scald until the morning after a certain night at the theater, when she had emerged from the hot building into the cold night air and experienced a decided chill, which lasted until he had reached home and retired to her couch.

THIALION.

BY J. D. ELY, M. D., TOLEDO, OHIO.

(Reprinted from *The Toledo Medical and Surgical Reporter*, March, 1900.)

One of the most satisfactory of the newer preparations that have come to my notice is thialion, which is a combination of lithia and a saline laxative. The desirability of such a combination is apparent, and its usefulness in the treatment of many diseases must become more generally recognized as its use is extended. Defective elimination is such an important causative factor in most of the diseases we have to treat, that the remedy or combination of remedies which will remove this is first considered and prescribed.

"Timely Catharsis" was the subject of one of the most profitable lectures, given by my old professor of therapeutics, that I ever listened to, and a subsequent article by him on the subject is one of my most valued possessions. The salines were favorites of his, particularly sulphate of magnesia, and the results he obtained by their timely use were such as to convince all who were privileged to observe them that they are the most generally useful, as is now so universally understood. The salts of lithium have also become better known, and their value in the treatment of numerous diseases so generally recognized that the physicians are few who do not prescribe it now.

Lithia is, perhaps, second only in importance to the salines and their combination, as in thialion, which I believe is most valuable. Previous to my acquaintance with thialion, I had been in the habit of prescribing lithia and the salines separately, and quite satisfactorily so far as results were concerned; but so much more pleasant and effectual has their use been in the combination, thialion, that I now prescribe and recommend it exclusively whenever the lithium and the salines are indicated.

It has a very wide range of usefulness and is indicated, particularly, in the uric acid diathesis, which is now understood to prevail in many diseases where it was formerly not considered as a factor, if recognized at all. To enumerate them and to particularize, would require too much space, hence I will only mention, to illustrate, its effects in one case I have under observation, and which for some time baffled the efforts of a number of physicians besides myself. Mrs. M., a rather fleshy widow, sixty years of age, a subject of rheumatism for a number of years, which during the cold, changeable weather usually confined her to bed, and kept her pretty constantly under the care of a physician.

These attacks of rheumatism were latterly accompanied by laryngo-bronchitis, with paroxysms of asthma, which were very difficult to control, and from which she was never relieved until antilithias and salines were used freely and for a considerable time. Various preparations of lithia and the sulphate of magnesia, were used quite satisfactorily for some time, but the best results were obtained by the use of thialion. It not only relieved the patient of all unpleasant symptoms, but apparently has cured her, as up to the present time this winter she has been free from the usual trouble, and there have been no symptoms indicating its return.

This case is mentioned, particularly, not only because it illustrates the permanent good influence of thialion, but on account of a number of the effects of uricacidæmia rarely observed in one patient, but which have been and are now recognized as due to the same cause, in many. The physician who is not posted on the many manifestations of the uric acid diathesis and its

successful treatment, is sure to profit and feel well satisfied in the reading of the abundant literature now being published in the medical journals throughout the country.

REPORT OF A CASE OF CYSTINURIA COMPLICATED WITH URICACIDÆMIA.

BY G. A. GILBERT, M. D., DANBURY, CONN.

Visiting Physician Danbury Hospital.

(Abstract from *The Chicago Clinic*, April, 1900.)

Mrs. W., æt. 59, a well known physician in one of our northwestern cities, has been a sufferer from facial neuralgia for many years. Early in the winter of 1873, after arriving home from a long cold drive in the country, she was taken with severe pain in the pectoral region and over the left eye. Thereafter, upon every exposure to cold, or upon overworking, neuralgia of the eye and head reappeared. This condition occurred at intervals during the next twelve years and then disappeared. Again in the fall of 1893, when crossing the street in the face of a heavy wind, she suffered another attack of still greater intensity. "It seemed," she says, "as though a thousand red hot needles were being thrust through the right side of my face—especially the upper lip, the pain causing the water to gush out of the right eye and spurt over the top of my head." Medicines were taken during the next six months which gave considerable relief and the patient thought herself cured. "But it then returned again," she writes, "and from that time on I have tried many physicians and medicines, but with no avail." The treatment consisted of diet, various mineral waters, special treatment of nose, throat and teeth, change of climate and travel. She not only took baths in the Ranchers Colorado Springs, near Pueblo, but during the latter portion of last winter visited Mexico.

Her attention was not attracted toward her kidneys until about three years ago, when she noticed uric acid deposits in her urine. Supposing it to be ephemeral, little thought was given to it until she began to notice that she had to rise many times in the night to urinate, when it would often be impossible to void more than tablespoonful, "although," says she, "the desire was just as intense as if the bladder were full." She then began treatment for her kidneys, taking lithia and remedies of that character.

Throughout all of this period, in addition to her other troubles, the patient's bowels have been constipated to an alarming degree. "She is, and has been for many years," writes her husband, "constipated the worst way; has had an operation on the rectum, (stretching, etc.) but all to no purpose." It finally became necessary to use a salt water solution enema every night in order to produce an evacuation. An operation for hemorrhoids was also performed, but the constipation remained unimproved. Mercury in all its forms was taken, as well as Carlsbad salts, hydrastis, etc. "The constipation remained the same," she states, "regardless of what I took, and my stools were nearly always white except just while I was taking something to act on the liver."

The patient's general health at the beginning of December last, as described by herself, was as follows: "I am the poorest in flesh I have ever been; have a great deal of confusion in my head, and blurring in my eyes; a good deal of mucus in the posterior nares; chill easily; limbs swell slightly from the knees down; a little puffy over the eyes; sleep a little from about 1 or 2 A. M. until 5 or 6 A. M. My eyes feel as though they were padded, and sometimes I find it very painful to wash and wipe the right half of my upper lip and around my nose."

A probable explanation of the cause of the patient's suffering is given in the words of her husband, who is also a physician, and who says: "She is of uric acid diathesis; *in fact she is full of the acid.*" Writing under date of Dec. 14, 1899, he says: "About three weeks ago I came across the treatise on thialion and commenced prescribing the remedy for my wife, giving a teaspoonful in hot water four times the first day, three times the next two days, and night and morning the rest of the time, until she had taken nearly two bottles. It had the effect of increasing the quantity of her urine making it neutral, etc., besides evidencing itself in the peculiar odor of her stools. Last Tuesday evening I gave her in addition the salt water enema. Wednesday morning, in the vessel where she urinated, at the bottom, was a large quantity of crystals (about $1\frac{1}{2}$ drms.), like these I enclose to you. Will you kindly aid me in this case? 1st. What are these crystals and what caused them to pass? 2d. Is it a sign of returning health? 3rd. Should she take larger doses of the thialion?"

On receipt of the package above mentioned, I exhibited its contents to the local physicians of the city, none of whom were able to state the nature of the crystals, which were hexagonal in form, of a chalky appearance, and about the size of a half a split pea. The package was then forwarded to a prominent manufacturing chemist of Baltimore, who replied shortly afterwards as follows: "Your esteemed letter was received in due time, also a little later the box containing the mysterious crystals. As we could not discover the nature of these crystals in our laboratory, and believing that it would be of interest to you to know something definite concerning them, I applied to Dr. Chas. Simon, of the Johns Hopkins hospital, who has made a specialty of the analysis of urine and other secretions, and is considered one of our best authorities on this subject. He examined them carefully and states that the crystals are *cystine*—a metabolic anomaly of rare occurrence. He is very much interested in them, and requests that about a gallon of the patient's urine be sent to him in half-gallon bottles, putting a tablespoonful of chloroform in each to prevent decomposition."

A specimen of the patient's urine was subsequently sent to Prof. Simon, as above requested, who reported that this second sample was entirely free from cystine; that the deposit consisted entirely of uric acid, and, that in solution he could likewise find nothing. He requested however, that the woman be instructed to send on any further concretions she might collect, and to send on her urine again as soon as more was eliminated.

Such, then, is the case of this interesting case at the present time. The first of the questions propounded by the patient's husband has been satisfactorily answered. In regard to the second, the future alone can determine the answer, but it would seem advisable to continue the treatment. That the thialion caused the expulsion of the concretions, there can be no question. The patient complained of a severe renal colic the night before the crystals were voided, evidencing their passage through the ureters, from the kidneys into the bladder.

In the opinion of the writer, the neuralgia in this instance, appearing after every exposure to cold, was due to the presence of uric acid in the circulation. The sudden chill, checking the acid excretion from the skin, rendered the blood, of course, less alkaline, causing the sudden deposition (in the various connective tissues of the body) of the uric acid crystals, which irritated chemically, as well as mechanically by their points; the surrounding tissues and nerves in their vicinity, producing the intense shooting pains described by the patient.

NOTES ON URICACIDÆMIA.

BY J. LINDSAY PORTEOUS, M. D., F. R. C. S., YONKERS, N. Y.

Physician to St. Joseph's Hospital, Yonkers, N. Y.

(Abstract from the *New England Medical Monthly*, April, 1900.)

In April and May of last year I published an article on uricacidæmia. Since that time I have tried many so-called remedies for the distressing symptoms which are developed in this condition. Haig is an acknowledged authority on things pertaining to gout and the uric acid diathesis, and from a considerable experience in the treatment of such cases my experience teaches me that many of his statements are correct, but not all.

Seeing that opinions are so different regarding the theories of causation and the action of drugs, the only and best thing for physicians to do, is, after careful observation and repeated urinalyses, give their opinion of the value of certain drugs which they have found beneficial. One patient of mine who had suffered much from attacks of gout, and had, after nearly exhausting the Pharmacopœia, had recourse to the Hot Springs of Virginia. Here in a short time he found relief. He kept up a strict diet for several months, gradually relaxing until he took all that was going. Soon, however, slight twinges of the joints and muscles reminded him that he must be careful. He applied to me and I ordered him a dram of phosphate of soda every morning in a tumblerful of hot water. This had the desired effect to a certain extent, but still stiffness remained and an occasional headache. The acidity of the urine had not decreased much, suddenly rose until it reached 67.8 gr. in twenty-four hours, that is, the 50 ounces of urine passed during the time contained that amount. The urea amounted to 455 grains, and the uric acid 2.61 grs. I learned that Dr. Pole, of Hot Springs, Va., highly recommended a chemical compound of lithia, called thialion. I resolved to try it in this case,

and found after giving it in dram doses three times the first day and once every morning afterwards that the urine increased to 62 ounces in twenty-four hours. The urea increased from 455 grs. to 489.8 grs. The uric acid decreased to 1.08 grs. and the acidity had fallen from 67.8 grs. to 36.02 grs. The diet was the same before and after the thialion was given.

For a few days after the administration of the drug there were more pains than had been previously. This is the same as takes place while taking the Virginia baths and is supposed to be caused by the rapid elimination of the uric acid or urate of sodium from the affected parts. Now, if, as is asserted by Haig, a decrease of the acidity of the urine means an increase of the alkalinity of the blood, this medicine must be considered very beneficial, as, according to Haig, the uric acid must be in a more soluble condition, and therefore more readily excreted, because the blood is highly alkaline. But in this case the uric acid decreased. For this I cannot account—but the improvement in the patient's condition points to the fact that the urea has much to do with the disease, as I have already suggested. It is sad to tell, but we must admit that a correct knowledge of the causes and treatment of gout is yet to be obtained, and there is still a wide field for experiment before we can arrive at a thorough understanding of this common disease.

Another case where much relief was experienced after the administration of thialion, was that of a lady who had long suffered from pains and stiffness in her joints with almost daily headaches. She has been taking this drug for one month and has not had a headache for three weeks. She says she has not been so long free from headache for many years. I could report many cases which have been benefited by the use of this drug but will only mention one more. [The writer here gives description of a case of Bright's disease, in a young man of 28, who was treated effectually with thialion in the manner recommended above.—Editor.]

SOME CLINICAL OBSERVATIONS ON LITHAEMIA.

BY ARCH DIXON, JR., M. D., PORT HUACHUCA, ARIZONA.

(Abstract from *Louisville Monthly Journal of Medicine and Surgery*, May, 1900.)

I could give from my notes many cases, in which the relief from distressing symptoms of long duration, and where sufferers had been almost hopeless of relief, would be shown; but the narration would serve no other purpose than to lengthen this tedious paper, if given in detail. I will merely allude to a few of them, as showing some of the common differences in type.

CASE I. The son of a physician, married, age forty-six, a high liver, had for three years been subject to these nervous symptoms. In this case renal congestion was so marked a feature as to cause apprehension of some organic disease of the kidneys. Under the proper treatment as above with thialion the functions of the liver were restored, the nervous and renal symptoms disappeared, and he regained, and so far as I know, is still in comparatively vigorous health.

CASE II. A perfectly temperate man, age fifty-six, was for two years subject to vertigo. He had also muscular debility, nausea and some anasarca. Under careful regulation of the diet, free action of the bowels, etc., the vertigo and muscular weakness disappeared and his apprehensions with them.

CASE III. A lady of middle age, with some renal symptoms, headache, nausea, oedema, etc., was under my care at intervals for two years. Though much improved in many respects the nausea having nearly disappeared, she consulted me again last fall for frequent and painful micturition and incessant tinnitus aurium. By the use of thialion, whiskey, cream and a restricted diet, she obtained relief from all the nervous complications.

CASE IV. A well nourished and apparently vigorous man of thirty-two, in active mercantile life, complained bitterly of seminal emissions and loss of venereal appetite, but chiefly of a constant sense of cerebral confusion with loss of memory, at times so absolute that he could not remember the price of his merchandise or make simple arithmetical calculations.

He was married and of steady habits, excepting that his meals were irregular and hastily taken. He suffered to a slight degree from hemorrhoids and headache. The emissions proved to be trifling and distinctly prostatic, not seminal. As he was an excessive smoker, tobacco was forbidden and with proper regulation of the quantity of his diet and the use of thialion

and mineral tonics, the unpleasant cerebral phenomena were relieved entirely and permanently, a year having now elapsed without any recurrence.

CASE V. I will allude to but one more. An old gentleman, a steady drinker, past seventy, has been for many years a notable specimen of the hypochondriac. He has, however, certain difficulties that are not imaginary, especially prostatic enlargement in an aggravated degree. He has for years suffered from tinnitus, slight vertigo and palpitations. He was under my care for a year or two before I could get him under decent control. He was depressed, skeptical sure that he was to lose his mind or die suddenly of apoplexy or heart disease. Would follow a prescription for a day; then seek another; buy every quack medicine that was recommended (and serve it fortunately in the same way), until finally under the threat that I could or would do no more, a promise of obedience was exacted and tolerably kept until now; under comparatively simple treatment life is no longer a burden to him or his friends.

How deranged functions of the liver, imperfect disintegration and oxidation of the albuminoids, result in the excess of lithic acid in the blood, is a physiological problem, for the discussion of which I must refer to Petherill, Charcot, Murchison, Da Costa and many others. The opinions of writers and experimenters are still quite at variance upon many points. As to treatment, it is already sufficiently indicated, if we accept the theory of the lithæmic origin of the trouble. That the liver may rest from its overcharged labor, saccharine, nitrogenous and alcoholic ingesta must be diminished, both sedentary habits on the one hand and excessive fatigue on the other, and over cerebral exhaustion from study or worry avoided, they all tending to weaken the circulation and so favor acid accumulation.

A FEW NOTES ON URIC ACID.

BY D. M. GIBSON, M. D., ST. LOUIS, MO.

(Abstract from *The Clinical Reporter*, May, 1900.)

A. G., at. 64, has complained of "liver trouble" for some months. No special attention did he pay to his condition, until a swelling of the feet was noticed. The physician to whom he applied for treatment, somewhat bettered his treatment, and removed the dropsical condition by the free use of Epsom salts. The administration of the salts, however, so weakened the patient and destroyed his appetite, that he was forced to discontinue it.

He presented the following condition: Skin, sallow colored; tongue, heavily coated—a dark brown; action of the heart, weak; region of the liver, swollen, but not sensitive; no dropsical condition at the time, but an excessive constant thirst. The urine was not passed in excess, but it contained an excessive amount of solid matter. He was advised to stop the use of the salts, to partake freely of good nourishing food, but to eat sparingly of meat; was given the indicated remedy, and, in order to mechanically remove or wash out the condition which was clogging his system, he was given also thialion, one teaspoonful in a glass of hot water, to be taken each morning before eating.

There was no appreciable effect for about four days. At the end of this time the stool became more frequent and horribly offensive in odor, the urine became more copious and lighter colored, and my patient's condition began to improve. He was continued upon the remedies which he had taken, and now, at the end of three weeks, announces himself to be better than he has been for a year. His appetite is good, his tongue is clean, the liver is reduced in size, and the functions of the body rapidly approaching the normal. In his case medications must be continued for some time, but his improvement has been remarkable.

CASE II. H. B., at. 23 years, has enjoyed good health up to the present time, except for constipation; complains of pain in chest, difficult breathing and smothering. Pulse, irregular; heart's action, labored and jerky; traces of albumin in urine, which is scanty.

Various remedies were administered, and with some success, but upon the least exertion the symptoms returned, and the bowels *would not move*. He was now given thialion, a teaspoonful in a glass of hot water, night and morning, and all other medication discontinued. Improvement was rapid and marked, so much so that in three weeks' time, he was able to return to his work, and the constipation is a thing of the past. The amount of thialion taken is being gradually lessened, but the improvement continues.

A BRIEF INQUIRY INTO THE TREATMENT OF HAY FEVER.

BY EDWIN HANK, M. D., TANNERS CREEK, VA.

(Abstract from *Gaillard's Medical Journal*, May, 1900.)

In considering the treatment of these cases there are two causative factors to be removed—either the "external irritant" or the "predisposition." To those who can afford to visit the mountains in the fall, the cure is simple, for if they cannot remove the irritant they can remove themselves. But for those unfortunates who are obliged to remain at home, there is only one alternative—to remove the predisposition. Aside from directions given as to diet, largely interdicting nitrogenous food stuffs, it should be the duty of the attending physician to stimulate the action of the patient's kidneys, liver and bowels, and thus give exit through the proper channels, toxins which the skin and mucosa have been attempting to remove. Among many other cases similarly tested, the following one is cited here to illustrate the fact, not only that the uric acid diathesis may be a common predisposing cause of hay fever, but that timely prophylactic treatment with appropriate anti-uric remedies may effectually prevent an attack.

Mr. F., et. 52, a prominent trucker of Norfolk county, has been a sufferer from the effects of hay fever every fall for the last twelve years, each attack beginning about the first of August and lasting until frost. Various methods of treatment have been tried in this case, without benefit, until finally I determined to give the anti uric acid treatment a trial, being led to this decision from the unmistakable evidences of uric acid deposits in the patient's urine. Other symptoms of the diathesis were also prominent. The skin was dry and yellow, the conjunctiva injected, and patches of congestion found in the pharynx indicating the "rheumatic sore throat." The patient's general health was not seriously affected, but it was evident that uric acid salts were gradually deposited in the follicles of the skin and mucosæ, the latter, lining the nasal passages, being almost constantly swollen and emitting a sticky mucus.

Treatment was begun about a month before the anticipated attack. I directed that one teaspoonful of thialion be taken in a teacup of warm water about one hour before each meal for three days, after which the number of doses was reduced to one each day taken before breakfast. I also eliminated from his diet, as far as possible, all purin and albuminous principles. No signs of trouble appeared until the latter part of August, when, owing to exposure to cold and wet, the patient began to evince signs of his dread malady, and suffered mentally in consequence. I increased the number of doses given to three times a day for two days, and then fell back to one dose per day—but increasing the size to one and a half teaspoonsfuls. The result was most satisfactory. Within a few hours all symptoms of the attack had subsided and the case progressed without further trouble. A somewhat peculiar fact, to be mentioned in this case is, that notwithstanding his rigid diet, the patient steadily increased in weight.

URIC ACID DIATHESIS.

BY J. MC D. MASSIE, M. D., ST. LOUIS, MO.

(Abstract from the *St. Louis Medical Era*, March, 1900.)

Mrs. Y., whom I have often treated for various ailments, consulted me for a severe headache which had resisted for several days the usual domestic remedies she had been accustomed to employ in such cases. The pain affected one-half of the head. There was some periodical abatement of symptoms, and I concluded that it was due to malarial toxæmia. After giving her a mercurial purgative, I prescribed three grains each of quinine and acetanilid in capsules, to be taken every two or three hours until relieved. After taking the medicine two days without any benefit, she called me to her house, and asked me to try something else. I remembered that I had treated her a year prior to this time for rheumatism. I now suspected some uric acid complications, and made an examination of the urine. It clearly revealed a perverted proteid metabolism, considerable acidity, specific gravity 1.028, high colored, dull-red, depositing brick-dust sediment composed largely of uric acid crystals. I found she had partaken of meat three times a day in excessive quantities, but had indulged sparingly in cereals and

fresh vegetables. She had not for a long time touched a glass of cold water, but had substituted for this drink coffee three times a day, and a glass of beer occasionally between meals. She was obstinately constipated, her skin was dry, and her urine scant, always causing a burning pain when voided. I regulated her diet, allowing only a small amount of meat once a day with a more liberal supply of fresh vegetables. The coffee and beer were forbidden, and plenty of water substituted. She was advised to take a warm bath once a day, put on thick flannel under-garments, and walk briskly from half a mile to a mile twice a day. The only medicine I prescribed was thialion. At first she took a teaspoonful of this in a wineglass of hot water every three hours; later a teaspoonful three times a day, and when fully relieved of her headache, a teaspoonful only in the morning before breakfast in as much warm water as she could drink. Under this treatment she began immediately to improve, and in less than a week she regained her usual health. It is now three months since she was restored to health. She has had no return of the headache.

I have used this laxative salt of lithia in many obstinate cases of urticaria, eczema, lichen, and psoriasis associated with the uric acid diathesis, with similar results. I attribute its magic effect in these cases to its action as a solvent of uric acid, as a diuretic laxative, gentle diaphoretic and metabolic stimulant. Possessing such therapeutic properties, it must be useful in a wide range of pathological conditions.

ON THE CAUSATIVE RELATIONSHIP BETWEEN URICACIDÆMIA AND URTICARIA, WITH REPORT.

BY HALCYON A. WILBUR, M. D., PHILADELPHIA, PA.

(Abstract from the *Southern Practitioner*, May, 1900.)

The opinion has now become quite generally accepted that functional inactivity of the liver (produced by frequent dietary errors) is a fruitful, and perhaps principal cause of the so-called uric acid diathesis, and that this latter condition, when once formed, gives rise to various disorders of the tegumentary system, the etiology of which has hitherto remained somewhat in obscurity.

Mrs. G., et al. 48, was first seen in August, 1898. She was suffering from a severe attack of urticaria, which had broken out suddenly the previous night, involving both thighs and a considerable portion of the abdomen. The eruption consisted of wheals of a pinkish color, about the size of a split pea. The itching was so intense as to keep the patient awake throughout the whole of the night. This was the third attack from which she had suffered during the previous two months. The treatment consisted simply of a local application of thymol solution (gr. j to $\frac{1}{2}$ j of alcohol), and a mild aperient, the eruption usually disappearing the following day.

During the ensuing year the patient appeared for treatment for the same trouble on seven different occasions, similar treatment being adopted in each instance, the eruptions usually disappearing within twenty-four hours. In July, 1899, she again presented herself for the same trouble in a still more aggravated form, the wheals this time having developed into large blebs which covered nearly the entire trunk of the body and both limbs. Careful inquiry into the cause of the trouble revealed the fact that the patient was habitually constipated, and suffered occasionally from flatulency and indigestion. She was subject also to headaches and attacks of vertigo. She had become very nervous, was losing flesh and strength, and slept poorly at night. Her conjunctivæ were injected, showing the characteristic evidences of liver trouble. The urine was scanty, of a brick-dust color, of high specific gravity, with unmistakable signs of uric acid deposits.

Believing that the patient was suffering from uric acid diathesis, and that this was the predisposing cause of the urticaria, constitutional treatment was at once instituted with this end in view. Thialion was administered in teaspoonful doses every three hours the first day, until a large mushy movement of the bowels was effected, which occurred soon after the third dose. Thereafter, a teaspoonful was administered in a glassful of hot water every morning upon rising. This was continued until two ounces of the remedy had been taken, when the dose was diminished to a teaspoonful three times a week,

The result of the above treatment has been eminently satisfactory to patient and physician alike. More than six months have now elapsed since the occurrence of the last attack of the eruption, no signs of which have appeared in the interim. The patient's general health is much improved; she has gained in flesh, eats better, sleeps better and her bowels have become comparatively regular. Her skin, too, is less dry, perspiring freely on occasion. The urine has become paler and more abundant, is neutral in reaction, and presents none of the signs of a functionally inactive liver, such as were found so conspicuously present at the examination in July when beginning the anti uric acid treatment.

ASTHMA AND THE URIC ACID DIATHESIS.

BY S. S. GARST, M. D., JONESBORO, TENN.

(Abstract from the *Oklahoma Medical Journal*, May, 1900.)

To illustrate the benefit that may be derived from appropriate anti uric acid treatment in cases of asthma of long standing, my own case is submitted here as being of no little interest in this connection, to wit:

My age is 36, am married, have wife and one child. My mother was an asthmatic and I was supposed to have inherited the disease from her, although the presence in the neighborhood of numerous candy shops and constant abuse of the stomach may have been equally prominent as etiologic factors in the case. My first bona fide attack of the dread disease occurred when only fourteen years of age, and for more than twenty years thereafterwards I suffered all the torments of a modern Prometheus.

The attacks at first were rather light in character, but steadily gained in virulence until I was twenty-eight years of age, when they reached their climax. This was in March, 1894, at which time I was attending a third term session at Jefferson Medical College, Philadelphia, Pa., and was there put under the treatment of Prof. Roberts Bartholow, himself. During a period of six weeks, Dr. Bartholow made examinations of my urine, and failed to find evidences of any albumen, or discover anything that would lead to the belief that there was any structural change in the kidneys. But he found an immense quantity of uric acid! He then advised iodide of potash, diet and change of climate. These directions were strictly and religiously observed, and immediately afterward I went to Los Angeles, California.

For two years I lived in comparative peace, so far as asthma was concerned, when I returned to Ashland, Ohio, where the attacks once more became such a torment to me as to render life almost intolerable. Hoping to obtain some relief I then came south to the mountains of Tennessee, but to no avail. For ten months I was unable to sleep in a recumbent position, and was obliged to sit up in bed. I had now begun to despair of ever obtaining any relief. I had tried remedies, from iodide of potash to every imaginable form of patent medicine, without even temporary relief.

It was at this time that my attention was directed to the laxative salt of lithia, thialion, as an effectual anti uric acid remedy, which had already been used with success in chronic cases of asthma. When I first began its use I was suffering from a fresh supply of "cold," and as a result asthma was plying its paroxysms in its most hideous forms. To my surprise and delight, however, the attack was broken up in a few hours. I continued to take the remedy, a teaspoonful in a glass of hot water every morning upon rising, until every sign of my old enemy had disappeared. The most noticeable immediate effect of this treatment, was that exhibited by the urine which was at first made strongly acid and afterward became alkaline. It also became clearer and more abundant, the previously existing brown color and brick dust sediment disappearing entirely. The bowels, too, became more regular, and attacks of vertigo and headache were mere things of the past.

Months have now gone by without even a symptom of the dread disease, notwithstanding frequent exposures to inclement weather. I can retire to my bed every night, lie down and sleep the tranquil sleep of the just. This is a boon which is only to be fully appreciated by me who have sat up for months at a time, laboring diligently for my breath and expecting each moment it would be my last. It is, perhaps, too early to pronounce a really permanent cure in this case, but I feel assured that with reasonable caution as to diet and exercise, and with

a watchful regard as to the appearance of uric acid deposits, taking the remedy occasionally to stimulate the action of liver and bowels, "I may be promised immunity from any further attacks of my old complaint."

ANTI URIC ACID TREATMENT IN DYSPEPSIA

BY P. K. BETHEA, M. D., SOCASTEE, S. C.

(Abstract from the *Georgia Eclectic Medical Journal*, May, 1900.)

The following case is cited here to illustrate the salutary results of the solvent treatment in dyspepsias of long standing—the remedy used being lithia in combination with a laxative alkali:

H. G., male, æt. 36, has been a sufferer for the past ten years with indigestion, complicated with well marked symptoms of neurasthenia. During the entire period he has been treated by several physicians without getting any perceptible benefit, although at times he admitted temporary relief. His symptoms were as follows: Tongue coated brown; bad taste in the mouth—especially in the morning on rising; constantly trying to get a full breath and succeeding only occasionally. Especially would the dyspnoea trouble him, after eating a full meal or something that would disagree with him. This was evidently due to accumulation of gas in the stomach from fermentation of food, since a glass of soda water, or drink of whiskey, would almost invariably relieve him.

The patient was troubled, too, with insomnia. He would pass through the night, dozing and dreaming, his sleep never being refreshing, and in the morning would be tired and worn out. He grew despondent and melancholy, having the constant fear that something terrible was about to happen. He was fearful of being alone, and would not sleep without a light in his room. He was melancholy, suspicious, jealous and irritable, sometimes giving way to fits of temper without cause. "The future had nothing in store for him, the past was a failure, and present existence a torment."

Every week or two (sometimes not so often) he would have a bilious attack, when all the previous symptoms would be much aggravated. He then became languid and dull, with a heavy, oppressive feeling in the stomach. The various secretions of the body, too, would apparently become locked, when a dose of calomel would clear him out and give temporary relief for a few days. The bilious attacks would then again recur, and the incapacity to draw a full breath would become much worse. He finally became disinclined to mental or physical exertion, and grew firm in the belief that he had "heart disease" and that his disability was permanent.

It was at this stage of the case, when all of the standard remedies for indigestion and neurasthenia had been tried without avail, that the "anti uric acid treatment" was adopted. The patient was put upon teaspoonful doses of thialion, every three hours the first day, until a free movement of the bowels was effected, which occurred soon after the fourth dose. Thereafter, for two weeks, a half teaspoonful was given an hour before meals—after which time the dose was reduced to a teaspoonful in a glass of hot water every morning upon rising. From the very first dose the patient began to improve, until within six weeks (when less than eight ounces of the remedy had been taken), the distressing symptoms that had troubled him for ten years had vanished like mist before the sun.

Brethren, try the "anti uric acid treatment," especially thialion, on your old chronic cases of indigestion and liver troubles, and you will not be disappointed in the results.

CEREBRAL PHASES OF LITHÆMIA AND THEIR TREATMENT.

BY JOHN J. BERRY, M. D., PORTSMOUTH, N. H.

(Abstract from the *New England Medical Monthly*, July, 1900.)

CASE I. Mrs. S., aged 46. A neurasthenic and invalid for six years. Had employed several physicians with indifferent success. Nervous dyspepsia. Insomnia, mental depression. Ordinary symptoms of spinal irritation. For a year had secluded herself within the house and recently had become almost a monomaniac as regards taking cold, and practised a most elaborate system of preventive medicine, a part of which consisted in constant rest in bed.

and exclusion of air and light. No abdominal or other organic lesions. No emaciation. Urine high colored and somewhat diminished in amount. Contains no albumen or casts, but large quantities of amorphous urates. Has noticed brick dust deposits in the urine for several years. On inquiry it was learned that the previous treatment of her case had consisted in the use of digestives, tonics, nerve sedatives and salines, none of which had afforded any particular benefit. She was now given thialion in teaspoonful doses, with large amounts of water and occasionally cascara for an increased laxative effect, the constipation being particularly obstinate. These drugs were continued in varying doses and intervals for about three months, during which time no other medicine except placebos were administered. In addition, there were employed the various devices for modifying her manner of living and her mental condition as well. Under the simple medication above described her improvement was prompt and progressive. After being induced to venture out of doors, the amount of exercise was increased to its utmost limits, until she finally became something of an enthusiast on the subject and walked with ease an average of five miles a day. The appetite and digestion became normal. The insomnia was in great measure relieved, while the general neurasthenic symptoms entirely disappeared. An improvement in the condition of the urine was noted on the third day of treatment though it was nearly a month before it could be considered normal in character and amount. At the present, about five months from date of my first visit, she is to all appearances, in perfect health, both physically and mentally.

CASE II. Mr. M. Aged 60. Retired merchant. Excellent family history. No history of previous constitutional disease. During past 6 or 8 years, several slight attacks of subacute rheumatism. Habits good, though a good liver, and a daily user of wine with meals. Pliethoric and of sedentary habits. Four years ago began to have headaches of the congestive variety. Occurring at first every few weeks, but gradually increasing in frequency and severity and frequently induced by trivial causes. Occasional attacks of vertigo on sudden change of position, and sometimes numbness, sensations of heat and cold and shooting pains in the extremities. *Musca volitantes* and flashes of light. No arterial degeneration appreciable, but a full, hard pulse, showing considerable tension. Insomnia very pronounced for several years, for which he employed the various hypnotics, but chiefly chloral. Is very nervous, irritable and melancholic. Had passed two seasons at a German Spa and had consulted several specialists who had warned him against exercise, Turkish baths, mental application and alcoholic beverages. Patient suffers also from a chronic eczema of right leg, involving the entire anterior portion from ankle to knee. Dry and scaly in character, with considerable induration. Same condition in slight degree back of ears.

Urine is high colored and slightly acid. Sp. gr. 1.030. Uric acid crystals in large amounts but noting else of importance.

The treatment instituted in this case was as follows: Interdiction of tea, coffee and wine, small amounts of brandy and soda being substituted. All digestible foods in moderation, with a strictly bread and milk supper. Turkish bath once a week and a hot bath daily. Bicycle exercise, commenced cautiously and increased according to indications. Golf in the intervals. He was also given thialion in teaspoonful doses in a glass of hot water before meals, with an extra portion of water after the same. The amount of this drug was somewhat increased afterwards, but subsequently the original quantity was administered. To increase at times the laxative effect, an occasional dose of Carlsbad Salts was recommended. These were the only remedies employed and with the measures above advocated, comprised the entire treatment for the subsequent month, when his condition was as follows: Much improved in every respect. But one attack of headache and for past week has used no hypnotic. Eczema less annoying.

Urine much lighter in color and with sp. gr. of 1.024. A few crystals of uric acid. Has become much interested in golf and wheeling and is on his feet most of the day without any apparent inconvenience. From this time on the improvement was uninterrupted. The uric acid crystals disappeared from the urine. All the head symptoms abated and he was able to enjoy a fair night's rest without any hypnotic. The eczema disappeared from the face and showed marked improvement in the leg—only one large patch remaining. He returned to his home in New York last October, feeling better than for many years.

MUSCULAR RHEUMATISM: ITS ETIOLOGY AND DIAGNOSTIC RELATIONSHIP
WITH APPENDICITIS.

BY EUGENE C. UNDERWOOD, M. D., LOUISVILLE, KY.

Surgeon B. & O. S. W. Railway, K. & I. B., Etc.

(Abstract from the *Alabama Medical Journal*, May, 1900.)

In October, 1899, a consultation with a brother practitioner was held, to consider the advisability of an operation for appendicitis in the case of a woman, aged 45, who had complained for a week or more of circumscribed pain over the appendix, which was gradually getting worse. The other symptoms in the case were not well marked. She had a slight fever, however (temperature 101), and complained of sleeplessness, constipation and loss of appetite. The subjective pain was localized in the right iliac fossa directly over the appendix, though pressure there would cause it to radiate upward and forward nearly as high as the epigastrium. The patient was extremely nervous, having become imbued with the idea that she had finally become a victim of the dread malady she had so long feared. Her treatment had consisted of cold applications to the abdominal wall, rest in bed, diet, and opium internally to relieve the pain.

Examination failed to reveal any enlargement of the liver and percussion there was not painful. Analysis of the urine, however revealed biliary elements and uric acid crystals in abundance. Questioning, too, elicited the fact that the patient had previously suffered from two attacks of "stiff neck," as well as a lame shoulder. Feeling certain that the diagnosis of appendicitis was a mistake, the treatment was now entirely changed, the patient being put at once upon the anti uric acid treatment for rheumatism. Thialion was administered in teaspoonful doses, every two hours the first day, until a free bilious passage from the bowels was effected. Thereafter a teaspoonful was given in a glass of hot water every morning upon rising, and an antinitrogenous diet ordered.

The improvement was marked from the outset. The patient's appetite was restored, she became less nervous and slept better at night. The pain, too, gradually abated and at the end of a fortnight had disappeared almost entirely, the woman having resumed her accustomed household duties and abandoning the idea of appendicitis altogether.

Other cases have been seen by the writer wherein the symptoms at first pointed strongly toward appendicitis, the patients themselves fearing that disease. But every case of this kind has been speedily relieved by appropriate anti uric acid treatment of the character above described. Accounts of similar cases, in the practice of other physicians, might probably be multiplied almost indefinitely. In the words of Professor Adler, "Examples might be adduced in which myositis of the abdominal recti simulated peritonitis or intestinal colic, or when myositis of the quadratus and obliqui was diagnosticated as renal colic, but perhaps this will suffice to show that rheumatism of the abdominal muscles must be taken into consideration as among the possibilities in all cases of painful abdominal affection in which the diagnosis is at all doubtful."

ILL-DEFINED SYMPTOMS OF URICACIDÆMIA TREATED BY THIALION.

BY J. H. TYNDALE, M. D., LINCOLN, NEB.

(Reprinted from *The Woman's Medical Journal*, June, 1900.)

That the salts of lithium are of marked value in promoting the solution and elimination of uric acid is a well known fact. Until recently the trouble has been to find a preparation of lithium that would act both as a solvent and an eliminative—in the latter capacity preferably through the bowels by favorable action on the portal circulation and depletion of the liver.

An equally well known fact is that the gouty and rheumatic diathesis—all manifestations of disease now grouped under the collective title of uricacidæmia—shows its activity in all three fields of disorders—as an infection of the "auto" variety; as a local inflammation and as a disturbance of innervation in the shape of central or peripheral nerve pain of a persistent character.

In the new preparation known as thialion we have a remedy that fulfills the indications of a uric acid solvent, or neutralizer, or whatever you choose to call it, and a depletor of the portal circulation in a not too violent manner. To illustrate the variety of conditions and not sharply defined collection of obscure symptoms in which thialion is applicable, let me recite a few cases from my practice.

CASE I. Mrs. H., aged 38, farmer's wife. Complained of vague muscular pains all over the body, notably in the lower extremities. Skin dry. Feeling of languor. Appetite fair but bowels sluggish. Uric acid always found in urine. Salicylates and iodides disturbed her digestion. Gave her thialion—teaspoonful in cup hot water before breakfast and toward evening; all symptoms disappeared after two weeks. Bowels regular. Now let her take a teaspoonful once a week.

CASE II. Dr. G. M. S., aged 42. Asthmatic attack occurring at night about once a week for the past eight years. Recently occur every other night and during any slight changes in the weather. Attacks have weakened muscular elements of the heart. Asthma found to be based on rheumatic tendencies and aggravated by peripheral irritation in the shape of nasopharyngeal catarrh. The latter cause removed and the doctor put on thialion once a day, and later on every third day. Intercurrent indigestion had previously brought on attacks. After four months' treatment digestion is perfect, and attacks of a mild sort happen only once in three weeks. These are probably due to smoking, a habit the doctor is about to break himself of.

CASE III. Max W., aged 34, accountant. Family history gouty. Manifestations of this tendency consisted of vague sensations in tendinous tissues alternating with facial neuralgia. Constipated as a rule. Chief complaint was of insomnia, found to be dependent upon increased resistance to the general circulation. Uric acid crystals. Patient thin and nervous. In this, as in some other cases, I gauged the dose of thialion by individual tolerance—half teaspoonfuls twice a day being quite sufficient. Two relapses occurred within five months. None for the last two months.

CASE IV. Louis K., aged 36, saloon keeper. Tendency to obesity, though he does not drink at all. Very good natured, but acknowledges himself getting fidgety on slightest provocation. Troubled with hemorrhoids and itching of anus. From time to time active pain in intercostal muscles of left side, which he says his family physician tried to laugh him out of. Diagnosed as uricacidæmia. Thialion in teaspoonful doses twice a day for two weeks, and then one dose every other day for ten days. All symptoms disappeared. Bowels regular. Gave a dose of ichthyl once a day as after-treatment, because this had proved successful in former discomforts.

CASE V. W. F. A., aged 33, railroad machinist. This was a case of obstinate infiltration of anterior and posterior arches of the palate, with reflex impairment of patient's singing voice, upon which he prided himself. I failed to discover any rheumatic, gouty, or other general tendencies during six weeks of reasonably successful local treatment. Quite suddenly the patient developed acute articular rheumatism (wrists and knee joints chiefly), and a return to the active inflammation in the tonsillar arches. Put him at once upon thialion—moderate teaspoonful twice a day for five days, followed by a heaped teaspoonful every second day, early in the morning up to date. Both articular manifestations and palate infiltration have entirely disappeared, but the voice remains a trifle husky.

URICACIDÆMIA, HAY FEVER AND ASTHMA.

BY WM. R. LOWMAN, A. M., M. D., ORANGEBURG, S. C.

(Abstract from *The Medical Summary*, June, 1906.)

Recently I have had a very interesting case of uricacidæmia. A patient of 63, who from early life has had a gastro-intestinal catarrh, but who in recent years has enjoyed excellent health, with the exception of an annual attack of the rose cold variety of hay fever. These attacks of hay fever have in recent years become very obstinate, lasting some six weeks, more or less, beginning with pollination in the spring, and ending with the full growth of leaves

producing very distressing symptoms—ophthalmia, severe and irritable bronchial cough and asthmatic attacks—worse at night—and the various other concomitant symptoms.

The gentleman referred to is very fond of fresh meats, and especially indulges in a pork diet and the sausages and liver pudding throughout the winter season. This diet seemingly agrees well with him, except as to an occasional attack of mild congestion of the liver and fermentative diarrhea, which he usually promptly relieved with minute doses of calomel. But this regime this year by cumulative effect produced a decided uricacidæmia. For several weeks in the latter part of February and the first of March he experienced a decided vertiginous tendency which produced some alarm in him, he fearing that there was some insidious lesion developing in the brain of which this was the prodromal symptom.

My direct attention was called to the matter by a more decided attack of vertigo, which sent the patient to bed with some febrile movement, retching and vomiting, and frequent watery stools—a uricacidæmic explosion expending its force on the mucous surface. Rest and emptying the stomach did not relieve the symptoms, but the slightest movement of the head or light in the room produced nausea and retching. The head could not be raised in the slightest degree without experiencing decided vertigo; thick, tenacious secretions, as soon as accumulated in the stomach, produced intense nausea and agonizing retching. None of the usual gastric sedatives produced any effect, and only by paralyzing the vomiting center by hypodermic injections of morphine gained the patient any respite or rest.

An examination of the ejecta showed a condition of extreme acidity. On the evening of the second day I administered a tablespoonful of milk of magnesia with an equal quantity of hot water, every two hours, to correct this decided acidity. The effect was magical. After this the bowels were swept out with mild chloride of mercury, etc.

The vertigo gradually abated, and in three days the patient was put on thialion, or laxative salt of lithia, of which he has taken something over two bottles, with rapid and entire abatement of the vertigo. The patient now seems hale and hearty. He is now taking one dose of the thialion daily, and up to the present time, April 15th, although the foliation of vegetation in his vicinity is well advanced, there has been no appearance of the rose cold. The patient's regimen has been much restricted as to meat diet; vegetables, milk, broiled salt and fresh fish, broiled chicken and farinaceous articles are allowed.

CHRONIC NASAL CATARRH.

BY W. E. WEED, M. D., RIDGEFIELD, CONN.

(Abstract from the *Columbus Medical Journal*, July, 1900.)

J. K., a young miss of 15, had been a sufferer from pharyngo-nasal catarrh for more than eight years, or since her first entrance into the public schools at the age of six. The first evidences of her trouble were exhibited in the form of coryzas, which were attributed to exposures to cold and wet. She was from the outset often kept at home owing to attacks of tonsillitis, which continued to occur at frequent intervals throughout the whole course of her school life; the tonsils and uvula being habitually flabby and swollen, and the pharyngeal mucous membrane congested and extremely sensitive. At the age of ten, signs of deafness appeared, due evidently to plugging of the Eustachian tubes with mucous from the catarrh. About this time, also, she began to be subject to violent headaches which necessitated her withdrawal from school work for two or three days at a time. Her tone of voice became characteristic of catarrh, being thick and indistinct. Her breathing too, was stertorous and labored; owing to the partial occlusion of the posterior nares from the hyperthrophied mucous membrane. Every morning upon rising an interval would be spent in hawking and spitting and clearing out the bronchial and nasal passages of the discharges which had collected over night. Attacks of vertigo at last became frequent, and the patient, at the age of thirteen, was finally obliged to withdraw from school altogether. She had now become nervous, sleepless, and of a soured disposition, giving way at times to almost maniacal fits of temper.

The treatment during all this time had been mainly local. An eye specialist had been consulted who attributed the headaches and vertigo to astigmatism, for which glasses were tried and fitted. For the deafness, an Eustachian dilator (Valsalva's method), was used, but

afforded only temporary relief. Post-nasal injections, both of an antiseptic and astringent character, were tried, as well as ante-nasal douches, but without material benefit. It was not, in fact, until a chance observation was made by the father of the patient, that the true nature of her trouble was suspected. He had long been a sufferer, himself, from spasmodic asthma, for which he was undergoing treatment at the time, receiving marked benefit from the anti-uric acid regime which had been recently adopted in his case. He suggested that the same remedy be given his daughter.

An examination, which was now made for the first time, of the patient's urine, revealed an abundance of uric acid crystals, and she was at once put upon thialion, a teaspoonful in a glass of hot water every morning upon rising. Nitrogenous foods were largely interdicted, and a diet list made out which was strictly observed by the patient from this time forward. Within a month improvement began to manifest itself all along the lines. The bowels became more regular, restful sleep was obtained, a more amiable disposition appeared, and the patient reported that she could already breathe better, talk better and hear better.

The constitutional treatment was continued in this manner for the ensuing six months, at the end of which time the patient had become metamorphosed from a thin, anemic, disagreeable looking invalid, into a healthy young girl, at least ten pounds heavier. The catarrh of which she had so long complained, together with the deafness, headaches, and voice symptoms, had practically disappeared. She has since continued to improve rapidly and is now employed as a clerk in an establishment requiring ten hours' mental application daily, without experiencing more than the ordinary ill effects from the confinement.

THE TREATMENT OF URIC ACID POISONING—WITH CLINICAL REPORTS.

BY ROBERT C. KENNER, A. M., M. D., LOUISVILLE, KY.

(Abstract from the *Denver Medical Times*, June, 1900.)

The following briefly told cases, illustrate the treatment here advocated.

CASE I. This man was a hotel keeper and an epicure, and indulged himself freely in those foods and drinks which stand in a causative relation to uric acid poisoning. He had all the symptoms of lithemia and had been confined for the last few days with swelling in the shoulder joint and pain in both arms. Along with this was constipation and a furred tongue. He was put on thialion, teaspoonful four times daily, and this was changed to three teaspoonsfuls, and later to two teaspoonsfuls daily. His diet was corrected on the lines already laid down.

His improvement was noticeable on the third day, and after that there was a speedy disappearance of his pain and swelling, and he soon resumed his business. He observed the dietary restrictions and took the thialion for six weeks, and has not suffered since, and his general health is now most excellent.

This patient had been a sufferer for some time with vertigo. From the second day of treatment he began to suffer less with this symptom, and has now been exempt for some months.

Not only in this, but in other cases has vertigo disappeared under the employment of thialion.

CASE II. This patient was a chronic sufferer with indigestion, biliousness and diffused pains. When I was called her feet were swelled and she suffered a great deal of pain. On thialion this woman ceased to have biliousness and indigestion, and her improvement was rapid from the second day of treatment. After taking the thialion for several weeks she says her health has never been so good.

Before taking thialion, this woman had not been able to use her left arm without considerable pain for nearly two years. Either her wrist or the elbow joint would be swollen nearly all the time.

Since the time she began employing this remedy this state of swelling and pain has subsided.

CASE III. This was a gentleman who took insufficient exercise and ate the most delicate and stimulating foods. He had well marked symptoms of uric acid poisoning. I had him live

up to a rational diet and to take thialion with regularity. This course had the happiest effect upon him and he made steady progress toward a permanent cure.

Seen a few days ago, this patient says he has a clear head, his bowels act freely and he never was so free from pain in the last five years.

Consideration for time and space will not permit me to go further in giving clinical histories; these, it is believed, make it clear that the treatment here advocated is the most promising one in this affection.

TREATMENT OF LITHÆMIA.

BY FRANK M. FLOYD, M. D., ST. LOUIS, MO.

(Reprinted from *Interstate Medical Journal*, June, 1900.)

The old saying that "there's nothing new under the sun," comes in singularly well in regard to medical cases, yet the recountal of cases that at first sight seem ordinary, oftentimes instructs and guides us under similar conditions. The cases that I wish to narrate come under this heading. It is to be hoped that they will prove interesting and instructive.

The first case, Chas. R., came to me last October, presenting the following history: Age, 29 years; single; height, 5 feet 10 inches; weight, 200 pounds. He had had a fair complexion, but at the time he appeared before me he was sallow. He was a bookkeeper by occupation. He complained of "lost manhood." His was the usual story of having been bled mercilessly by quacks and charlatans. In conversation he appeared highly nervous and excitable with shaking hands and quivering voice; said he had been almost without sexual desire for two years past. He was utterly incapable of obtaining an erection on most occasions. He had chronic constipation. Frequent micturition, in small amounts and with burning sensation.

He affirmed that he had never had gonorrhea. He stated that he usually awoke with a headache, and on several occasions had vomited his breakfast. He said he thought he had heart trouble, because he had a dull, heavy pain over the region supposed by him to be the heart, but really in the epigastric area. He even stated that his heart stopped beating (?) at nights, and that he slept but little as a result. His expression was apathetic, and he had yellowish discoloration of the conjunctivæ. His tongue was heavily coated and his breath offensive. He spoke disconnectedly; seemed depressed. His penis and testicles were well developed; there was a small varicocele. Urinary analysis showed urine of a dark-red color, strongly acid; specific gravity, 1.026. Had an abundant red precipitate and large quantity of uric acid crystals.

A diagnosis of lithæmia was made from the urinary examination. I could not believe that the lithæmia was responsible for the extensive train of nervous symptoms in this case, but with a view of attacking the lithemic condition, directly, I prescribed thialion, a teaspoonful in a glass of hot water on arising and retiring, for three days; then the same dose to be taken only in the morning, for a week thereafter. He reported at the end of ten days. He complained then of being troubled with a "running off of the bowels," instead of being constipated, as was the case before. He had to go to stool twice and sometimes three times in twenty-four hours. At the same time he passed large quantities of urine, which he believed to be weakening to his sexual apparatus.

While dissatisfied with the treatment, he admitted that he was relieved of the nausea and headache, and that he no longer felt burning on urination. Examination of six ounces of urine showed it to be slightly acid, specific gravity 1.022, with some uric acid crystals present. His skin began to clear up, and he was relieved of his "heart trouble," as he no longer mentioned it. He was directed to continue taking the medicine every other day.

I saw him at the end of two weeks, and was surprised at his appearance. His skin was clear, he had lost about twenty pounds in weight; cheeks were rosy, and he said that his headache, constipation and nausea no longer troubled him. Examination of the urine showed it to be slightly acid, specific gravity, 1.018; and containing only a trace of uric acid.

The most marked change, however, was in his nervous system. His appearance, demeanor and conversation were entirely changed. He would not admit that he was cured of his "lost manhood," but agreed with me that he was on the highroad to recovery. He was ad-

vised to take the remedy for a month, twice weekly, and I also prescribed a stimulant to be taken occasionally. He returned in six weeks, looking well, and remarked to me that he had never felt better in his life, and that his sexual capabilities were all that he desired. This history forces me to the conclusion that his whole trouble was due primarily to his lithæmia.

About the time of his discharge, I was consulted by Mrs. M., married woman; age, 39 years; mother of five children. She said that she was suffering from change of life and wanted relief. She stated that for the past eighteen months, menstruation had been scanty and irregular; that she had gone over a period of three months without menstruating, and that her menstrual flow had always been regular before that time. She complained of hot flushes, shortness of breath, severe headaches, pain in back and shoulders, great restlessness at night, constipation and a continual feeling that something dreadful was going to happen.

After an examination I concluded that her diagnosis of change of life was correct. Examination of her urine showed it to be quite heavy, and that it contained an abundance of uric acid crystals. She was put on the same treatment as the first case narrated. In two months she was relieved of all unpleasant symptoms; was menstruating regularly, and at the end of the third month the flow was as copious as it had ever been.

I have since had other similar cases, and in almost every instance relief of the lithæmic condition was followed by a disappearance of the nervous symptoms. There is ample authority for the statement that excess of uric acid in the system causes neuroses of various clinical aspects. These cases are comparatively frequent, and attention is directed to this condition.

DEFECTIVE EYESIGHT IN SCHOOL CHILDREN.

BY G. A. GILBERT, M. D., DANBURY, CONN.

(Abstract from the *American Medical Compend*, July, 1900.)

A boy twelve years of age, son of a well-known local mechanic, was brought to my office by his mother three months ago for treatment of defective eyesight and headaches. The history given was substantially as follows: Four years ago the patient began to be troubled with headaches accompanied with nausea and was frequently sent home from school reported sick. These were at first called "bilious attacks," until shortly afterward the teacher reported that the child was becoming "near sighted" and ought to wear glasses. An eye specialist was consulted who coincided in this opinion, and attributed the headache to the eye trouble. Glasses were tried and fitted, and the child resumed school work. At first the vision improved slightly and the headaches became less frequent, but the old condition of affairs soon returned again and new glasses were necessitated. Since then the glasses were changed twice and although temporary relief was obtained each time, the child gradually grew worse until finally removed from school altogether.

Questioning elicited the additional fact that during all this time the patient's general health had been more or less affected, as indicated by occasional attacks of vertigo and sleeplessness. The child, too, had been constantly growing more irritable in disposition, becoming angry at his young companions on the slightest pretext—sometimes breaking out into almost maniacal fits of temper. It was learned furthermore that his appetite was capricious, and what was of still greater importance, that he had always been allowed to gratify an inordinate desire for pastry and sweetmeats. Suspecting uric acid poisoning, the urine was examined and found to be typical of that well-known condition.

Anti uric acid treatment was at once decided upon. Thialion was given in half-teaspoonful doses, in a glassful of hot water, every morning upon rising. The father, being a firm believer in meat as a food for the workingman, had been accustomed to procuring it for the table regularly three times a day. Instructions were given on this head, at least as far as the child was concerned, that this nitrogenous diet should be largely restricted, and that sweetmeats should be positively interdicted—a plan which was faithfully observed.

Within a month marked improvement was manifest. A healthy appetite was restored, the headaches and vertigo gradually disappeared, and the patient's disposition much improved. After four weeks of this general treatment the child resumed his school work, which he has not since been obliged to abandon—even temporarily. Two weeks ago the glasses were removed and the eyesight being tested with charts in the usual way was found to be perfectly normal.

THE URIC ACID DIATHESIS—ITS TREATMENT.

BY K. L. SUGGETT, M. D., ST. LOUIS.

(Abstract from *Climate*, July, 1900.)

I have used most of the natural waters, but with far from gratifying results. Whether my unsuccessful experience with them should be attributed to the patient's lack of perseverance or the small amount of lithium in them, I cannot say; but be what it may, they did not accomplish the results hoped for. My experience with thialion has been very satisfactory and to it I give credit for a long list of cures of gout. It has a very large proportion of lithium in it, and that is of far more service in eliminating uric acid from the blood than the mineral waters, I have proven to my own satisfaction. I append a few records showing my experience with thialion in the treatment of uric acid diathesis:

Mr. J. R. C., aged thirty-nine. This gentleman, a railroad official, is a drinker of more than ordinary capacity and a gourmand of no mean ability. I was sent for by him, and upon my arrival found him suffering great pain, referred to the great toe—the point first selected. The patient, whom I found sitting up, was put to bed and every measure resorted to to ease the pain, which he declared to be almost intolerable. The limb was elevated and protected from the weight of the bed-clothing by an improvised apparatus. I applied absorbent cotton saturated with whiskey, belladonna and tincture of opium to the involved structure, and put the patient under the influence of an opiate. Upon disappearance of the most marked symptom, pain, I put the patient on thialion, directing him to use it several times during the day. At the same time I showed him the evils of intemperance in drinks and food, to which injunctions he respectfully listened but with no idea of following. However he still remains untroubled with the gout.

Miss E. C. T., age twenty-one; typewriter and stenographer. This young lady came to me suffering rather severely with pain in several joints, which upon examination, were found to be red, slightly swollen, and particularly painful on pressure. The relative infrequency of gout in females, especially in young females, occurred to me, and also knowing the abstemious habits of the young lady I hesitated to make a diagnosis of gout. Further questioning elicited the information that her father was, and had been for many years, a victim of uric acid diathesis. Upon hearing this history I at once determined upon an anti uric acid treatment, and after giving her instructions regarding the local treatment, prescribed thialion. In a short time the pain left her, and in a week or two she was free, apparently from the disease. However, I advised her to continue taking thialion, and thus far she has had no further trouble in this direction.

Mr. Charles J., age fifty-nine, attorney. He had been suffering from faulty elimination for several years, and at times, especially after a drinking bout or banquet, for both of which he had an undeniable fondness, he had to take to his bed. I saw him after one of his all-night affairs, and found him in bed paying the penalty he knew would follow his carousal. After taking such measures as I mentioned above to relieve the painfully conspicuous symptoms, I put him on thialion. I also gave him a mercurial purge to relieve the hepatic engorgement. He has now been taking thialion for several months, and feels that the dread disease has left him for good.

I might mention other cases in which I have used thialion with excellent results, but lack of time and space forbid. In conclusion I will say, however, that thialion has served me to good purpose, and will be resorted to in all future cases dependent upon an uric acid diathesis.

LEG-CRAMPS IN ELDERLY PEOPLE—A MODE OF TREATMENT.

BY JOHN MACDONALD, M. D., NEW YORK CITY.

(Abstract from the *Northwestern Lancet*, August 15, 1900.)

Dr. X—; physician, aged 57, had retired from a large and active practice a few years ago, since which time owing to a sedentary life, his weight had increased several pounds (to nearly 200), and symptoms of the gouty diathesis had become very troublesome. Notwithstanding a careful attention devoted to the diet, abstaining from those articles of food usually

prohibited in the ordinary "gouty list," his flesh was in no way reduced, and signs of uric acid poisoning daily grew more marked. Constipation, muscular pains, occasional vertigo, and *leg-cramp*, were the principal signals of distress. The urine, too, was scanty, acid, high colored and loaded with uric acid crystals.

Upon retiring at night the cramps in the leg would at times become so severe as to necessitate the administration of chloroform to obtain relief. Various expedients were tried, e.g. tying a band around the thigh, above the knee, massage of the muscles affected, application of heat, etc., but only temporary relief could of course be thus obtained. The feet, too, were habitually cold, and hot foot baths were frequently taken before retiring. It was obvious, however, that the underlying constitutional trouble which gave rise to these conditions must receive attention, and the general nutritive functions improved, before the local symptoms could be made to disappear. The constipation had become very obstinate, examination revealing a colon much distended, and which was probably largely responsible for the severity of the cramps. Physic was taken at frequent intervals but was only temporarily beneficial.

As the above measures were simply palliative in effect, it was decided to adopt some more heroic means—such as the anti uric acid treatment—and thialion was administered. During the first four days a level teaspoonful of this salt was given in a glassful of hot water, three times daily, before meals; the result of which procedure was a thorough evacuation of the bowels on the fourth day, ample in amount and prodigiously odorous in character. Thenceforward a teaspoonful was administered every morning early on arising.

The treatment was kept up in this manner for about two months, or until eight ounces of the drug had been taken, at the end of which time the patient's improvement was manifest. His naturally jovial disposition and cheerful countenance had returned, a hearty manner in greeting acquaintances became the rule, and no further complaints were heard of pains in the back and limbs, the patient moving about with some of his old time alacrity. The bowels, too, had begun to move more regularly, and it was probably largely owing to this fact in conjunction with a greater amount of exercise taken, that ten or twelve pounds of superfluous flesh had been removed.

The cramps, which had been so marked a feature in this case, gradually became less frequent, and finally disappeared; and now, after an elapse of several months, the patient states that he is entirely free from them. The writer has since adopted the same line of treatment in several other cases, usually in elderly people, and with the same gratifying results.

DOES THIALION TAKE THE PLACE OF CALOMEL?

BY R. A. MEATH, M. D., MEMPHIS, TENN

(Reprinted from the *Western Medical Review*, August, 1900.)

The following case has been of unusual interest to me inasmuch as it has developed a use for thialion which must prove of great value to every doctor practicing in malarial regions like the one where I reside. It is difficult for the physician not living in such places to realize the tremendous power exerted against the health of the community by malarial poisoning, which is always more or less associated with enlarged spleen, enlarged and torpid liver, together with constipated bowels.

Calomel has always been our mainstay, in fact it is impossible for us to practice medicine without it, with any degree of success. But it seems that in thialion we have a new remedy presented to us, which will not only cure constipation, relieve the torpidity of the liver, but also increase the activity and anti-malarial power of quinine.

I do not want to be misunderstood in this matter. I do not mean to say that two grains of quinine given with thialion is increased per se to four grains, but I do mean to say that by a thorough cleaning out of the liver, the reduction in size of the spleen, and the relief of the constipation, creates a condition by which the quinine is taken into the system more completely, more compactly, if I can so use the term, and is absorbed to a greater degree.

The case that I present here is typical; we have them by the hundreds in this section:

A woman, American, age 33, suffered for a long time with chronic malaria. The attack commenced with soreness through the liver, back, muscles of the back, and through the kid-

neys, radiating over the pubis and front of the abdomen, with extreme constipation, and when the stool was finally passed, it was of a light green color, almost as green as if Paris green had been mixed with water rather thick. The liver was enlarged, the spleen was enlarged, the skin was dry, rough and sallow, the liver spots were on the face.

She was ill quite a good while before I saw her first, and then was under my treatment for a good while before I thought that possibly thialion might do her good. And I was really astonished at the results. The first influence I noticed was that the green material stopped from the stools and they changed in character completely, and then she commenced to pick up, and the quinine took hold better, while the appetite improved. The kidneys slushed out and the spleen began to be reduced, and she got better fast.

I was satisfied that if I had used the remedy at the start of her sickness, she would have gotten well much quicker. I had been giving 1 grain doses of calomel every two hours for four doses; then in four to six hours I gave castor oil, but the action of this was not at all to be compared with that of thialion. In fact, I think the latter will take the place of calomel, and I am now carrying on an interesting line of experiments in this direction.

In this case, I gave thialion in teaspoonful doses, a teaspoonful in hot water taken three times the first day, and after that once a day taken in the morning on rising for three weeks, when she was entirely well.

We have a great deal of malarial fever here, with constipation, pains in the liver, stomach and kidneys, and I am satisfied that thialion will clear the system of the malaria, because it helps out the quinine. We have more or less rheumatism and neuralgia with soreness of the body and limbs associated with it, which is probably due to the improper elimination of the uric acid.

Of course it takes more than one swallow to make summer, but cases are rapidly multiplying where thialion has wielded a powerful influence for good in this class of cases, and I only hope that future experience will bear this out.

THE PROPER DOSAGE OF THIALION.

BY E. M. SMITH, M. D., NEWTOWN, CONN.

Ex-Vice President of the Danbury Medical Society; Member of American Medical Association; Fairfield County Medical Society; Connecticut Medical Society, etc.

(Abstract from the *Journal of Science and Medicine*, Portland, Me., May, 1899.)

The following three cases will illustrate some of the points I have given for your consideration:

Mrs. B., American, age 47, now passing menopause, is recovering from acute nephritis—urine scanty, high in specific gravity, exceedingly acid, liver torpid and inactive, bowels sluggish, torpid and inactive; a marked degree of mental hebetude.

This patient gave me considerable anxiety, inasmuch as I had given her almost all the diuretics with indifferent results—little better now, not so well a little later.

I finally put her on thialion in teaspoonful doses thoroughly dissolved in a cupful of hot water each morning, insisting upon the dose being taken as soon after waking as possible, and to be drunk as hot as she could. It was but a few days before improvement began all along the line. There was a general amendment—urine increased in quantity, and nearly approached the neutral line, bowels acted in the most satisfactory manner. In this case the liver played a most important part. This was stimulated until the stools became like that of the child. Mind cleared up, becoming very natural. She is now on the way to complete recovery, though I still insist that she take thialion three or four times in succession every two weeks. In this case the different symptoms added to the mental condition made it doubtful whether she could ever recover, but I feel confident that this most happy result will take place.

CASE II. Mr. M., aged 33, stout and heavy, farmer, weight 210 pounds, necessary that he ride a good deal over rough roads, has decided uric acid diathesis, urine clouded and highly acid, irritation at the neck of the bladder, constipation, enlargement of the liver, much muscular aching all over the body, heavy, dull aching pain over the kidneys, becomes easily tired

In fact, he presented all of those typical symptoms which follow in the train of uric acid diathesis where the bowels are constipated and the liver sluggish.

I did everything for him, but with indifferent success until I began using thialion in teaspoonful doses in hot water three times a day. There was a very decided action of the bowels and kidneys, in fact so much so that it was necessary for him to suspend taking the remedy for two days, when I returned giving him a small dose each morning in hot water as usual on rising. The improvement in this case was rapid, steady and uninterrupted. And while it is a long time since I prescribed for him, yet whenever he feels a return of the old symptoms a few doses of thialion, he says, fixes him all right again. Can you look in the mirror of your experience and duplicate this case? Can you see how many times it has bothered you to cope with such symptoms? *Verbum sat.*

CASE III. Miss C., age 35, short and stout, bilious by habit, slow by temperament, chronically constipated with small and insufficient evacuation of the bowels, urine scanty and highly colored with considerable brick dust sediment, skin and conjunctiva dark and muddy looking, suffered much from backache and drowsiness, with considerable muscular pains and aching.

This woman had been under a variety of treatment under not only my hands but under the hands of others with unsatisfactory results. Thialion administered in teaspoonful doses each morning with corrected diet soon gave relief and all the prominent symptoms faded away. Urine increased in quantity and urates were found in excess. Bowels moved freely and the eyes and skin resumed their natural color. She continued the treatment for two weeks, and so far as I can judge a permanent cure has been effected.

CHOLEBLITHIASIS, WITH CLINICAL REPORTS.

BY J. W. P. SMITHWICK, M. D., LA GRANGE, N. C.

(Abstract from the *Charlotte Medical Journal*, February, 1900.)

It is after the acute attack that treatment can do the greatest amount of good by preventing the recurrence. Acting upon the advice of theories, many physicians have been led to use the different salts of sodium, especially the sulphate and phosphate, in doses of one or two drachms daily. This has failed to give the desired relief in the majority of cases in my hands. In the course of experimental study I was led to try the citrate of lithia in conjunction with the phosphate of sodium, for its laxative effect, from the relationship of this trouble to that of the uric acid diathesis, and have noted some very happy results. At the present time I use the laxative salt of lithia—thialion—which precludes the necessity of giving the sodium salt.

To illustrate the value of and the results obtained by the above method I herewith detail the histories of a few cases:

CASE III. F. E., aged 63 years. I found this man suffering all the agonies of pain that could be induced by an attack of biliary colic. I used the hypodermic syringe and gave him a few whiffs of chloroform as quickly as possible. In thirty minutes I repeated the hypodermic injection, and in fifteen minutes more he was perfectly easy. I left some calomel and soda for administration. Returning the next day I found him doing well, having passed a stone early that morning. At that time I elicited the following history: That he had been troubled with these attacks for the last twenty years, but of late they had increased in frequency and severity, so much so that his life was a burden to him. He had tried everything that had been recommended for such troubles and failed to get any relief whatever. I put him upon thialion in teaspoonful doses in half a glass of hot water before meals and at bed-time. This treatment was kept up for four weeks, and then the dose was taken only at bed-time. Since he began the treatment he has enjoyed complete health, has had no symptoms whatever of the return of the colic, and says he feels better than he has for several years past.

CASE XIII. Mrs. A. N., aged 28, applied for treatment. She had been raised in all the luxuries of life, rather stout physique, and had had three attacks of biliary colic. All that time there was some tenderness over the region of the gall-bladder, though it was not enlarged. Stated that she was a large eater and especially fond of sweets. Was greatly troubled with constipation. I prescribed the laxative salt of lithia in teaspoonful doses in half glass of hot

water after meals and asked her to report at the end of a week. She did so and informed me that she had been doing well. All the soreness had disappeared, bowels had become regulated, and said that she felt better generally than she had in a long while before. I advised her to keep up the treatment for one week longer and then reduce the number of doses a day to one, which was to be taken at bed-time. At present she is doing nicely, not having felt any of the symptoms of her former troubles since she began the treatment.

These patients are very grateful to me for the benefit I gave them through this treatment, and they have shown their gratitude by sending me a number of good people who were troubled likewise. In the treatment of all of them I have had equally as good results as detailed above

THE TREATMENT OF GOUT.

BY CHARLES W. MCINTYRE, M. D., NEW ALBANY, IND.

(Abstract from the *Carolina Medical Journal*, January, 1901.)

Lithia has held its position with the advanced members of the profession for a considerable time, and its merits are not disputed. I employ laxative salt of lithia, thialion, which has given me more satisfaction than other preparations of the drug. It is well known that a laxative, in those who suffer with gout, aids materially in eliminating the poison. The superiority then, in employing thialion, is, that it brings to our service a pure lithia which has a laxative base. I exhibit it in doses of a teaspoonful two or three times daily—giving the remedy less frequently as the condition of the patient grows better.

CASE I. A patient, aged fifty, sent for me in the night. He was suffering with intense pain in his great toe, and his entire foot was giving him a great deal of pain. This patient was a hotel keeper and often drank too freely of malt liquors. In fact he made it a practice to drink ten or fifteen glasses of beer every day—often twice this quantity. He ate heartily always and took no systematic exercise. This man had had symptoms of uric acid poisoning before, but gave them no attention. He was now in the throes of the gout and was compelled to go to bed.

I gave him a hypodermic injection of morphine to relieve his pain, and had him begin with the thialion in doses of a teaspoonful every four hours. When I saw him twenty-four hours afterwards, his bowels had acted very freely and he had urinated several times, voiding much more than normal. He felt that his head was freer and that his "mind worked better," as he put it. His foot, which I had had wrapped in cotton batting, showed no further increase in swelling. The next day the patient was so far improved as to be able to sit up and rest his foot on a chair.

Five days later he was able to resume his duties as superintendent of his hotel. He took thialion for several weeks—a teaspoonful night and morning—and has enjoyed in the last three months better health than for years prior to this attack.

CASE II. Another patient was a lady about forty years of age, who came to the office for a prescription for rheumatism in her shoulder. This pain was the source of a great deal of trouble, and she said she had pain in her hip joints before it appeared in her shoulder. She was well nourished and was what might be said to be a high liver. She had all the symptoms of uric acid poisoning. She was told this, and that her hope for permanent relief lay in adhering to a correct dietary and the taking of a remedy for several weeks.

She began with thialion in doses of a teaspoonful before each meal. In three days her bowels acted rather too often, and I had her take the remedy only twice daily—before breakfast and at bed-time. In this dosage no inconvenience was noticed and the patient went on to an uneventful recovery. She took the thialion four weeks. After the fifth day she ceased to suffer pain, but I had her take the remedy longer in order to obtain its action as an eliminant and neutralizer.

CASE III. Another patient, a man who took life easy—a retired merchant aged 50—complained of vertigo and shooting pains—but with great "soreness" in his ankles. His was a typical case of uric acid poisoning, and he was advised regarding the diet and put on thialion in doses of a teaspoonful three times daily. In a week he took it only once a day, as his bowels acted now very frequently. He began to have no vertigo after the fifth day, and has remained

free from this trouble since. He has also had no further "shooting" pains nor have his ankles again given him pain.

CASE IV. Another patient aged forty—a watchmaker—had swollen knee joints and vertigo with a history of constipation and indulgence in gout producing foods. He also had attacks of melancholy which were very bad. He was not confined to bed and had come to the office for a prescription. He was put on thialion, and told to adhere to the instructions I had given him regarding diet.

This patient gradually recovered from his trouble, the period of time occupied in this case being four weeks. For the last two weeks he only took one dose of thialion a day, a teaspoonful before breakfast.

A CASE OF CHRONIC RHEUMATISM.

BY L. B. SMITH, M. D., HORNELLSVILLE, N. Y.

(Reprinted from the *St. Louis Medical and Surgical Journal*, March, 1901.)

Six years ago I had synovitis of the right knee joint, following an injury, from which I was confined to the house for several weeks, but finally recovered with slight stiffness.

In January, 1897, the same knee began to enlarge, which gradually increased, until it was at least as large again as normal. Before this time arrived, the left knee, left ankle, left wrist, right elbow and right jaw became affected, the latter becoming so bad that I could not place a teaspoonful of food between my teeth. I sat in a wheeled chair for twelve weeks, during which time I lost flesh and appetite, while sleep was almost out of the question excepting at short intervals. Before these conditions appeared, my urine was loaded with uric acid, and despite all remedies and treatment, could not get rid of it. Being a physician myself, in practice since 1875, I tried everything known to me, and a great many remedies recommended by my brother physicians, but the conditions remained the same, gradually becoming worse.

In October, 1898, I was forced to quit work, and went into the Steuben Sanitarium, where I commenced the use of baths, electricity and massage as well as medicines, following the same for several weeks. While I improved in some respects, the uric acid condition remained the same. When I commenced to take thialion, my strength was almost gone, and to all appearances, I was booked for another world.

One day, Dr. Walker, superintendent of the Sanitarium, called my notice to an article published in a medical journal, calling attention to the use of thialion in chronic rheumatism; and, as it did not bear any symptoms of being a fake preparation, I told him to get me some that I might try it, as I knew of no better subject to experiment on than a doctor. In forty-eight hours my urine was alkaline—an almost inconceivable result. After a few days, I only took one dose a day, *viz.*, a teaspoonful in half a glass of hot water, and I just balanced the urine from slight acid in the morning to slight alkaline at night. In a short time my joints began to decrease in size, and I continued to improve.

In July, 1899, I went up in the Catskill mountains remaining for six weeks for my general health, which did me worlds of good, and I returned to my home on September 1st a new man. I then commenced my practice again, and have continued to improve, until now I am as well as ever, except a little stiffness of the right knee, which is steadily improving. I still take a little thialion occasionally, as a preventative, as I have had all the uric acid deposits I want in my joints. I weigh now within five pounds of as much as I did before this attack. I never had rheumatism before and do not expect to have it again.

I have used thialion in many cases since, in my practice, with equally good results, sometimes varying the treatment to meet the conditions of the patient. One mistake in all such cases, is that they do not take the medicine long enough, for it has to remove the deposits through the blood by the alkalinity mentioned. Thialion certainly did for me what no other remedy did, (I took everything else, lithia in all other forms gave no results whatever, before taking this preparation). As this is put up for physicians' prescriptions, I can most certainly recommend it to their use.

ON THE USE OF THIALION IN THE TREATMENT OF ALCOHOLIC GASTRIC CATARRH.

BY BUCHANAN BURR, M. D., (HARV.)

Late Chief Medical Examiner of the New York Life Insurance Co.

(Reprinted from the *Louisville Monthly Journal of Medicine and Surgery*, June, 1901.)

In my experience as a medical expert in life insurance covering fifteen years, I have come in contact with a large number of men who do not consult their family physician because they believe they are in perfect health; I refer to the steady drinker, not to the man who drinks to intoxication, but to the man who never becomes intoxicated, but who drinks from four to twenty drinks of alcohol in some form daily and keeps sober (as he thinks.) The corollary of this proposition being that any man who drinks alcohol during business hours, fools none but himself.

These men will tell you that they are paid by their employers to drink, or cannot do their daily business unless they drink with their friends, so that we are not facing a theory, but a fact, when we admit that under our so-called civilization, there are men who, to earn a living must, or think that they must, drink alcohol daily in quantities which we as physicians, know to be prejudicial to health.

The consequence of this abuse of alcohol is too well known to the profession to attempt to explain; they live, they suffer, and usually when they come under professional care they die from pneumonia, appendicitis, typhoid or other intercurrent disease with vitality depleted and nothing to keep it up, with which to carry them over the crisis, because they have abused alcohol and we cannot use it as a stimulant; or we meet them later in life with cirrhosis of the liver, gastric catarrh, chronic interstitial nephritis, and sign their death certificates as dying from disease, when we know or should know, that alcohol persistently taken in moderate doses, has killed them.

Some three years ago, I heard of thialion from a professor of the University of Pennsylvania, and used it successfully for rheumatism and gout among my friends with unvarying success. I may state here, as it has nothing to do with this article, that in over a hundred cases of rheumatism and gout treated since 1898, I have never known it to fail to give relief, or cure absolutely; but the purpose of this article is to draw your attention to another use of these salts and that is, its use in the treatment of the gastric catarrh due to alcohol.

We all know that alcohol taken into the stomach in any form, produces gastric catarrh and from that, catarrh of the oesophagus and pharynx, (hence the "dark brown taste" complained of by drinking men). In treating a patient for rheumatism, who was the confidential agent of a brewery and had to drink large amounts of beer and other alcoholic stimulants, I gave him thialion, and he first informed me of the fact that it, besides curing his rheumatism, also cured his catarrh of the stomach, his so-called naso-pharyngeal catarrh, which was but secondary to his alcoholic catarrh of the stomach, and also cleared his liver, and "made him feel well." Since then, and that is three years ago, I have prescribed it to hundreds of men, not only for their rheumatism but simply as a corrective for alcoholic gastric catarrh and the cirrhosis of the liver, which always goes with it.

The symptoms most complained of in these cases are the "dark brown taste" in the mouth in the morning, the dull, dead feeling due to congestion of a cirrhoued liver, and the rheumatic pains under the left shoulder blade due to gas in an empty and congested stomach.

For this class of cases, I have found thialion almost a specific, taken in hot water, night and morning, as it not only soothes the congested stomach, but acting on the liver removes not only the alcohol imbibed, but, also with it, lithia resolves the uric acid and urates which are a by-product of alcoholic indigestion, to such shape that what does not pass through the bowels with the help of the increased biliary secretion, may pass through the kidneys without harm to them.

I am not writing a temperance article, but it is also true that as drinking is a disease largely due to alcoholic gastric irritation, I have also found that the soothing effect of thialion thus taken into the stomach has helped several of my patients to give up drinking, as the irritation being removed by its use, alcohol in the quantities drunk before was nauseating.

This article is written only to call your attention to the only remedy that I have ever met, that will help us to treat not our patients but our friends, who are more to us than our patients.

URICACIDÆMIA.

BY EDMOND JOHN MELVILLE, M. D., C. M., BAKERSFIELD, VT.

(Abstract from *The Clinical Reporter*, August, 1901.)

CASE II. M. D., married; aged 57; family history, good; hotel-keeper for years, had lived not wisely but too well. For the past ten years had been an agriculturist. May 2, 1900, developed pleuro-pneumonia which ran a regular course, fever reaching normal on the ninth day. Every third day thereafter, fever rose to 102 $\frac{1}{2}$, patient complaining bitterly of stabbing pains over the left side. Used blistering and morphia, etc., for a week, with but temporary relief. Friction sound over pleura very evident. Had treated him in the past for excess of uric acid, and now examined his urine, to find it greatly in excess. Gave thialion as in case I, until free catharsis ensued. After forty-eight hours urine was again examined, when the uric acid was found to be slightly above normal. The pain in pleura was diminishing and friction sound absent. Temperature, pulse and respiration now became normal, and remained so. His complete recovery was prompt and uninteresting. During the past year I have examined his urine several times and have found no excess of uric acid. However, he takes thialion about once a week as a gentle laxative, and to prevent the uric acid habit.

CASE III. Mrs. C. B., aged 48. In January, 1901 she had lagrippe with a recurrent attack in February, 1901. In April she began to develop soreness of joints; hips, knees, ankles and toes being attacked simultaneously. Joints were much swollen; were tender and creaked under manipulation. Temperature, normal; pulse, 85; respirations, 19; anorexia, complete; tongue, coated white; bowels, constipated; urine, loaded with uric acid and very scant. Diagnosed lithæmia. Used cabinet-bath once a day. Gave thialion in drachm doses, ordering that the patient sip a glass of hot water slowly shortly afterwards. This was repeated every five hours. The case proved to be an obstinate one, and only after eight doses had been given did the bowels act freely. As patient was rather anæmic, gave iron, arsenic and strychnine. This line of treatment was followed out more or less thoroughly, avoiding too profuse purgation, for three weeks, and although Mrs. B. had an acute exacerbation of the disease during that time, her gain was marked. At present, June 1, 1901, she experiences some stiffness in the joints, and occasionally a pain through the left heel. Nevertheless, she is doing her own housework with very little assistance. The thialion is still continued night and morning.

In reporting the above cases I have purposely refrained from making any mention of the good results obtained from any hard and fast rules regarding diet and exercise, as I believe these have little or no curative powers.

THIALION—ITS THERAPEUTICAL INDICATIONS WITH CLINICAL REPORTS.

BY C. W. CANAN, B. S., M. D., PH. D., ORKNEY SPRINGS, VA.

(Abstract from *New England Medical Monthly*, September, 1901.)

A few years ago my attention was called to this remedy by a brother physician. This friend said he had been a great sufferer from uric acid toxæmia and that thialion was the only remedy that gave him anything more than temporary relief. This remedy he said had cured him and he had since prescribed it in a number of cases with the most gratifying results. I at once secured a supply and began prescribing it whenever a case presented itself in which it was indicated. I will record a few clinical reports taken from notes made at the time I prescribed the drug.

CASE I. Miss M. D. Farmer's daughter aged 17, good habits, had an attack of acute inflammatory rheumatism two years ago, affecting ankles, knees, wrists, elbows and small joints of hands and feet; had to be handled in a sheet for about ten days when she partially recovered; but every decided change in the atmosphere would bring on a subacute attack. She spent two years in this condition, sometimes nearly free, at others had to walk by aid of

crutches, and sometimes confined to her bed notwithstanding she had taken various remedies. About two years from first attack, another very acute one came on, and she came under my care. She was given alkaline baths, and thialion was prescribed in teaspoonful doses every three hours until the bowels were well open and thereafter once or twice daily as indicated. The pain and swelling soon disappeared and improvement was marked in a few days. She made a complete recovery in six weeks, not even a trace of the trouble remaining except some damage to the heart, but that has been greatly reduced. One year has since elapsed and she has been entirely free.

CASE II. Mr. B. F. S. Merchant, aged 69 years, has been a high liver, eating for years whatever his palate called for, and drank the richest wines to be found on the market. About ten years ago, he developed gout and for a long time was a continuous sufferer from this malady; although treated by the ablest men in the profession. When he came under my care his feet were swollen and painful, also one elbow. After soliciting his history and making analysis of his urine, which revealed the cause to be an excess of uric acid, I at once decided to place him upon thialion in teaspoonful doses four times daily before meals and on retiring; these were reduced finally to one dose each twenty-four hours. The improvement in this case as certainly remarkable. The pain and tenderness began to disappear at the end of the first week; a reduction of the swelling soon followed and in one month the old gentleman expressed himself as feeling better than at any time since he had contracted the disease, ten years ago. He still continues the use of the remedy occasionally, and has been free from gouty symptoms.

CASE III. Miss E. S., accountant, age 28 years, weight 152 lbs., good habits, and a good family history, except for gout. Poor health since eighteen, complains of headache in left temple (sometimes right), bad eyes, had glasses prescribed two years ago by regular oculist; cannot do without them; complains of a great deal of vertigo. Pains, some through body, sides of legs, but especially backache. Also complains of indigestion and constipation. Menses scant, urine small in quantity, high colored and loaded with urates; no albumen nor sugar. Twitches and starts while asleep. Has been treated by various physicians with poor success. I diagnosed the case as one of neurosis, the result of uric acid excess, and prescribed thialion in teaspoonful doses before meals for the first few days and once per day thereafter. Improvement began almost immediately and in two months she pronounced herself entirely cured. Last winter she had a severe attack of lagrippe and the urine again became scanty and high colored and she suffered severe pain in back. I again prescribed the thialion and she rapidly improved and has since remained in good health.

CASE IV. Miss R. S., typewriter, (sister of last patient), age 22, had been suffering from constipation, vague neuralgic pains in different parts of body, rheumatism of wrists and elbows, sometimes in one then again in the other. Left side of face and forehead covered with pimples; chin and lips contain ugly brown patches or liver spots. She began menstruating at fourteen, has been normal in that respect, except an itching all over the body at the beginning of each period, which disappears when flow is well established. This girl, like her sister, had been treated by able physicians and had taken patent nostrums enough to make a bath. When she first applied to me for treatment I diagnosed her case as that of acne and chloasma, not being sure as to the cause, but concluded it was indigestion and constipation. These were corrected as far as possible, but the constipation still clung to her at times and her condition improved but little. Prescribed phosphate of soda without benefit. After several analyses of the urine I decided that the cause lay in a uric acid diathesis and began treatment accordingly. Thialion was given; proper restriction of diet enjoined; instructions given in massage and to my gratification the case improved rapidly. Bowels became regular, the acne, and chloasma disappeared, and her health has been as near perfect as one could expect.

CASE V. Mrs. L. E., married, aged 36, mother of four children,—youngest, 8 years old, old, with good family history, has suffered constipation for a number of years. For two years, before she came to me for treatment she had been suffering from an eruption, at times covering the whole body, face and head. This came in the form of small red pimples, which increased in size until they coalesced with each other in certain regions. Some would disappear in a short time while others broke down with a formation of pus and healed under a scab. The itching at the beginning of the eruptions was intense, in fact almost beyond bearing.

Shortly after the appearance of the first eruption she began to suffer from an acute pain in her foot; this pain extended upward affecting ankle, knee, hip, shoulder, finally locating itself in the hip and shoulder. The right side was affected first but later the same occurred on left side. Since these occurrences she has suffered a great deal, her joints having become stiff, preventing free movements. During the past two years she was treated by two physicians, one claiming the cause to be a congestion of pelvic viscera. The second one treated her for indigestion and constipation thinking that her troubles originated from these. Neither treatment benefited her and when she came to me she was so stiff that she could not bend forward and touch the floor. I treated this patient symptomatically for a while, but during this time I was studying the case carefully and from the knowledge gathered, linked with that from several examinations of her urine, I made a diagnosis of uric acid poisoning. The treatment was directed accordingly, and from the very first week improvement was noticed. The treatment consisted of first flushing out the lower part of the alimentary canal with large quantities of water to which a teaspoonful of table salt was added to each quart. This was followed with thialion, teaspoonful doses in plenty of hot water before each meal; this was reduced to two doses daily, and finally only one was given. This plan of treatment with proper dieting and exercise resulted in curing the patient.

CASE VI. Mrs. R. A., widow, age 51 years, mother of two children, the youngest 15 years, had been in good health until three years ago when she contracted malaria. Following this came congestion of kidneys and rheumatism. Before coming to me in the third year of her troubles she became irregular and a little later her menses disappeared. At my first call her left foot and ankle and right wrist were swollen; she was sallow and anaemic, spleen enlarged, constipated, and was having well-marked chills every few days. She could not sleep because of hot flushes and burning of the skin with some vague pains throughout the system, sometimes in one region, at others in another. Urine excessively acid; sp. gr. 1.028; quantity voided greatly below normal; no albumin or sugar but heavy deposit of phosphates. I diagnosed the case as one of malaria complicated with uric acid toxemia and vaso-motor disturbances of menopause. Thialion was used freely the first few days with colonic flushing with water, until alimentary canal was thoroughly cleansed; then the thialion was reduced to just enough to keep bowels soluble. Later I prescribed bromides at four and eight P. M., to control the flushes and produce sleep. Bowels were kept regular with thialion throughout the treatment. One condition disappeared after another and in a few months my patient was feeling herself again. In six months she considered herself cured, and stopped treatment.

TREATMENT OF SCIATIC NEURITIS DUE TO THE URIC ACID DIATHESIS.

BY H. EDWIN LEWIS, M. D., BURLINGTON, VT.

(Abstract from *The Vermont Med. Mon.*, Sept. 25, 1901.)

In beginning the treatment of rheumatic sciatica thialion should be given, a full teaspoonful in a glass of hot water every three hours until several free movements from the bowels are produced. Using so much water to each dose has the double influence of producing diuresis and at the same time preventing any irritating effect on the stomach or digestive tract. After free catharsis has been accomplished thialion should be given a teaspoonful in a full glass of water one-half hour before meals three times a day. Careful tests of the urine should be made from day to day and when the urine becomes neutral or slightly alkaline, the administration of thialion should be reduced to one teaspoonful a day, preferably in the morning. Thus used, thialion gives results highly satisfactory to both doctor and patient, but it should be remembered that careful attention to the diet is also necessary. As so admirably summed up by Thompson in his work on "Practical Dietetics"—the "basis of the diet should be farinaceous food with a few fresh green vegetables. Fish, eggs and fowl may be eaten, but dark meat is not desirable. Sweets and alcoholic beverages should be omitted from the menu, and all foods should be plainly cooked and eaten in moderation." A patient who will follow this treatment and regime with painstaking exactness can feel assured that his recurrent attacks of acute sciatic neuritis will grow less and less frequent and finally cease altogether.

For the immediate relief of the agonizing, excruciating pain caused by rheumatic sciatica many different remedies and procedures have been recommended. Some have been found serviceable but not a few have proven useless. One of the simplest and most efficient methods at our command for relieving the acute pain of sciatica is the subcutaneous injection of a pint

or more of hot saline solution in the posterior portion of the thigh in the vicinity of the sciatic foramen. The analgesic effect of such an injection is frequently surprisingly prompt and complete. In exceedingly chronic cases, however, the effect of the saline injection is neither so rapid nor satisfactory and in the presence of extreme pain, recourse to the hypodermic injection of morphine must be taken. Many authorities inveigh against the use of morphine, but when it is administered by the physician, as it always should be, there is little danger of the patient's contracting the habit, particularly if he does not know what is being given him. Certain it is that there are times when nothing else will afford relief, and in many instances its sedative influence will give valuable assistance in mastering the malady. Next to the saline injection, and the hypodermic injection of morphine, I have found the use of the thermo-cautery most efficient. It should be used thoroughly over the course of the nerve and the burns dressed with some soothing application. But no matter how complete or immediate relief is obtained from pain by these measures, careful attention should be paid from the first to careful systemic treatment for the purpose of removing the cause. A prudent diet and hygienic habits should be rigidly followed, and the wise systematic use of thialion will do the rest.

RHEUMATOID MENINGITIS.

BY O. HENLEY SNIDER, A. M., M. D., ATLANTA, GA.

(Reprinted from *New England Medical Monthly*, April, 1902.)

The above caption will appear to some as oddly coined but it is nevertheless applicable, and properly so in a most interesting case that recently came under the writer's care. The case was one of chronic rheumatism, with severe attacks at irregular intervals, between which the patient was able, for consecutive months, to go about the usual domestic duties, though at no time without more or less suffering.

In the instance under consideration, the brain symptoms were simultaneous with—if not preceding—the aggravated rheumatism, and were evidently set up by the same morbid conditions in the system, thus being a part and parcel of the disease proper, rather than an independent or complicating feature, in the usual sense. The case was one of uric acid excess, and in line with the theory of Dr. Haig, and quite eminent American authorities, the metabolic influences of this element evidently producing the brain symptoms in quite the same manner as synovitis, gout, etc., are produced.

I was called to Mrs. F., a mother, 56 years old, after two other physicians had treated the case—one, and nearly two weeks respectively. The patient was of a family whom I had never before called upon, and being in the vicinity of my residence out in the rural suburbs, where I have enjoyed an appreciative and select element of the patronage, I felt especial interest and anxiety as to the outcome.

From information as elicited it was easy to conclude that the patient was attacked quite suddenly with pains about the neck, extending upward through occiput and to the frontal region, becoming insensible before she could be prepared for the bed, remaining in a comatose state until about the fifth day, when consciousness slowly returned. The patient continued to suffer severe pain at frequent intervals, however, and when I saw her about three weeks after she was first taken, these severe attacks were centered about the lumbar plexus; coming on mostly at night, when prominent darting, lancinating currents, radiating upward into the head and down the sciatic route to the ankles. The latter were somewhat swollen, as were also the feet.

At this time her urine was very scant, highly colored, of heavy specific gravity, showing extreme acidity, and some considerable albumen, with frequent desire for micturition, and intense burning sensation following it; and with skin and general secretions *en status quo*. She had recurring rise of temperature, frequently reaching $101\frac{1}{2}^{\circ}$, with contracted pupils, glimmer before eyes, lapse of memory, etc., and especially at such times as severer pains came on.

Following the old routine line of treatment on the theory of systemic causation—with such incidental means as indications called for,—I brought about some slow improvement within about three weeks; but I could plainly see that the entire family, with the patient, were growing quite "impatient,"—regarding the improvement as rather slow.

I had learned that the well-known Dr. Wm. M. Durham, of the Eclectic School of Medicine in Atlanta, had treated this lady during her last severe attack (about nine months prior to this), at which time the stomach was the principal accompanying trouble, and that his success won their confidence, and hence I took occasion to consult the doctor, and after relating

the prominent features of the case, his only advice was to put her on thialion. On the following day, I carried out these suggestions, with some feelings of misgivings, however, inasmuch as I had never used thialion.

To my agreeable surprise, the patient showed some improvement almost immediately, which became so substantial as to justify my dismissing the case eleven days later, with instructions, however, to keep up the thialion indefinitely, the patient then being up and about the house.

This was early during December last. About ten days ago, the husband called to ask me if the patient could leave off the thialion entirely, as, he said, she was in better health than she had been in three years. I insisted that she should keep up the use of the drug, a few doses weekly at least, and this I presume she is doing.

One feature quite prominent in this case, was the evident interstitial nephritis, thus confirming the uric acid theory of primary cause and the effects of thialion in reducing its excess. Another feature worthy of mention is the fact that the pains were increased in severity the first two or three days, to the point that improvement in condition of kidneys alone kept me probably, from discontinuing thialion through disgust. The condition, however, was evidently due to the sensitive process of acid reduction itself, as carried on through the blood, and probably partly to bringing the patient from under the baneful effects of opiates, which had doubtlessly augmented acid accumulation, through absorption from gastro-intestinal tract.

In this connection I would insist that the pathological state of the brain coverings, like the general rheumatic diathesis, was essentially dependent upon uric acid excess—i. e., an excess due to accumulation and in turn dependent upon lessened excretion rather than secretion.

Thialion has been abundantly proven to possess solvent powers, especially by formation of soluble urates, thus facilitating the happiest means of excretion; and, to the writer, it showed marked influence over biliary secretions, and the means of diuresis.

With reference to the deposition of these infinitesimal scales directly upon synovial membranes and kindred structure, thus causing the several forms of rheumatism, the writer is confirmed as to its truth, and holds from observations, that an identical pathological process in the meningeal membranes, favored by hyperemia in that direction (determination of blood to the brain) does in like manner set up meningitis, either chronic, or acute (Cf. Dr. C. L. Tarleton, *Wisconsin Med. Rec.*, Feb., 1899).

The writer's observations as to the influence of thialion over the kidneys in the case above related, induced him to employ the remedy in a case of Bright's disease (with tendency to general arteriosclerosis) far advanced with marked improvement within eleven days.

A SERIOUS CASE OF DYSPEPSIA CAUSED BY URIC ACID.

BY W. H. BENTLEY, M. D., LL. D., WOODSTOCK, KY.

(Reprinted from *Uric Acid Monthly*, July-August, 1902.)

In August, 1899, I received a letter from Dr. S., a former friend of mine, but now, and for the 15 years last past, living at an extensive mining center in Arkansas.

In this letter the doctor stated that his eldest daughter, Betty, 24 years old, and unmarried, had enjoyed excellent health until she was 20 years of age, and that then, without apparent cause, she suddenly developed constantly sour stomach and utter inability to digest food, the same being raised from the stomach by sour eructations soon after ingestion—"real spitting dyspepsia," to use the doctor's expression. She had very costive bowels, but in all other respects than those named she was entirely well. She had been under the treatment of some physician all the while, but got no relief. The doctor said that there were eight creditable physicians in his town; that each one had treated the case until he voluntarily relinquished it, acknowledging his inability to relieve the patient. The last one, however, recommended a specialist living in a large city. Well, Betty was duly shipped to Dr. _____. He at first made light of the case, but after repeating for the ninth time the ant-acids, pills, powders and pepans that she had been swallowing for years, the doctor resorted to electricity. This made her worse, and she hastened home. This was not a case for electricity. The doctor, (i. e., Dr. S.) desired my views. I replied by asking for a specimen of the urine, for I thought this a case of uricacidæmia. In reply Dr. S. proposed to send his daughter to me for treatment, and awaited my reply. Well, early in September, Miss Betty arrived. She was the picture of despair. She had traveled all the previous night and till noon on the cars, added to which was a ten mile drive in a carriage. No wonder she appeared exhausted.

First, I gave the patient some grape juice, and told her to take all the rest possible. For tea, she had a cup of Japan tea with some crackers, and some of malted milk. That night the nurse procured for me a vial of urine. I analyzed same during the next day, and found that the patient's illness depended upon lithemia.

TREATMENT: That night on retiring she took a heaping teaspoonful of thialion in a teacup of hot water. She was directed to take a similar dose on arising in the morning, to be repeated every three hours till the bowels acted copiously, and then three times a day, before meals, until the bowels became too active.

Improvement was almost immediate. In three days the thialion was reduced to one dose a day. In ten days she was eating with impunity anything she chose. She was fond of vegetables, and ate at will, bacon, cabbage, beans, green corn, tomatoes, any kind of bread, pastry and cake of all sorts.

She remained with us till Oct. 25th. She had taken no other medicine but about $2\frac{1}{2}$ ounces of thialion. She had gained 35 lbs. in weight from Sept. 5th, and was in perfect health.

When she left I gave her a four ounce bottle of thialion, with directions for use, but she has had no occasion to use the medicine, as she often writes to us and always says her health is perfect. Her last letter, dated March 28, 1902, contains this statement.

AN EFFECTIVE URIC ACID SOLVENT AND ELIMINANT.

BY S. E. FOWLER, M. D., PH. D., KANSAS CITY, MO.

Prof. Diseases of Women and Genito-Urinary Diseases, Cook Memorial Medical College

(Reprinted from the *Canadian Journal of Medicine and Surgery*, August, 1902.)

Some time ago my attention was called to thialion, a laxative salt of lithia. Since then I have thoroughly tested it in a number and variety of cases, where in my judgment I thought its use was indicated. I can say that it has never disappointed me. In hepatic torpor, constipation, rheumatism, gout, incontinence of urine, and obesity, I have employed it with surprisingly good results. Have also used it in diseases of malarial origin, where its salutary effect upon the liver undoubtedly increased the efficacy of the symptomatic remedies used in these cases. I recently had a case of podagra (gout in the foot), male, aged 46; had always been a "high liver", intemperate and irregular in habits. Disease hereditary. Had been treated all along the regular lines for that disease, but with little benefit. I put him on thialion with restricted diet, systematic exercise, and vapor baths. Decided relief in a short time. Kept treatment up faithfully for about two months, and am still having him use thialion, although patient insists that he is cured.

In cases of sluggish action of the liver, so frequently met with and so difficult to satisfactorily treat, I get better results from thialion than from any other remedy I ever used, and, in the habitual constipation so prevalent among females, I find it a specific.

A case of obesity came under my care some time since. Lady, aged 52, had tried numerous "anti-fats," etc., but, as she herself remarked, she had seemed to "fatten on them." I prescribed thialion, and the proper diet and exercise. She was under my care two months, during which time her weight decreased 27 pounds, while her general health was much improved. I understand that she is still using the remedy.

I have also used this solvent remedy with good results in acute Bright's disease, and also in the albuminuria of pregnancy.

It seems to have a good influence in all genito-urinary diseases, and is an excellent remedy in incontinence of urine. A typical case (in my mind) was in my own family. Son, aged 14, had been troubled with incontinence of urine all his life. I had tried all the remedies for his trouble with which I was familiar, and had appealed to my brother physicians, but all to no purpose. The case seemed well-nigh hopeless. This was before I knew anything of thialion. When I first learned of the preparation, I began using it in his case, and am pleased to say that good results were manifested almost from the first day's use; after about five weeks use it was discontinued, and there has been no recurrence of the trouble since.

In renal calculi, where the calculi are composed of uric acid or urates, I consider it truly a specific, having obtained results in many cases with thialion that I have never been able to obtain with any other remedies. I would say to those members of the profession, who have never used this drug, not to hesitate to try it in the class of cases I have mentioned. There are many other classes of diseases where I am confident it will prove the remedy, but in which as yet I have not had the opportunity to test it.

URICACIDÆMIA.

BY B. F. COLEMAN, M. D., ARGUTA, ALA.

Read before the Southeastern Alabama Medical League, Oct. 22, 1902.

(Abstract from the *Mobile Medical and Surgical Journal*, November, 1902.)

For the treatment of this troublesome disorder, various remedies, with varying results, have been tried from time to time. Calomel, digitalis, colchicum, acetate of potassa, the salicylates, the salts of lithium, and others too numerous to mention, have been used with more or less favorable results. The carbonate of lithium has, for a considerable period, given more satis-

factory results than most of those named. The natural lithia waters do not contain a sufficient quantity of the salt to produce decided beneficial results. Various combinations, such as lithiated hydrangea, lithia tablets, and others have been recommended, but none of them have given uniform satisfaction. Lithium, in combination with an alkaline laxative, seems to more nearly meet the indications, inasmuch as the alkali combines with the acid, rendering it neutral, while the lithium converts it into the urate of lithium, which is the most soluble of all the urates.

The advantage of the laxative salt in this combination, is its stimulating effect upon the secretory and excretory organs. Until within the last few years this necessity was not fully appreciated, hence no remedy was presented to the profession, which performed the double function of converting the uric acid into an easily soluble urate, and at the same time of exciting the excretory organs to increased eliminative action, enabling them thus to take out from the blood this poisonous waste material and ridding the economy of its pernicious influences.

Fortunately for the profession, chemical science has come to our relief and given us a new salt of lithium which meets all the indications, and enables us to relieve our suffering patients of this hydra-headed monster, and restores them to health, happiness and tranquillity of the mind.

The manufacturers of this new salt have given it the somewhat unique name of thialion, thereby indicating its base lithium. It is the product of the chemical action of an alkaline laxative salt, upon lithium. Its action is three-fold. It converts the insoluble uric acid into the soluble urate of lithium; it stimulates all the emunctories to increased eliminative action, and unloads the system of its poisonous waste material; in brief, it is diuretic, diaphoretic, and cholagogue.

This paper would fail of its purpose without a few hints in regard to diet. All nitrogenous (purin) food should be prohibited so far as possible. Acid fruits and drinks are also to be forbidden. Milk, sweet and fresh, vegetables (except beans) butter, the yolks of eggs, rice, corn bread, light bread; fowl and fresh water fish in limited quantities. The excessive use of sweets and alcoholics must be denied. The urine should be tested daily with litmus paper and enough of the salt administered to keep it neutral or slightly alkaline, and the administration kept up until all the symptoms disappear, or until the patient is cured.

THE TREATMENT OF GOUT AND OBESITY.

BY L. BENNETT, M. D., CENTRAL CITY, KY.

(Reprinted from *Uric Acid Monthly*, April, 1903.)

CASE I. This patient, a man about 42 years old, applied for treatment of an attack of rheumatism, which had rendered the joints in his left arm stiff, red and swollen. The man was a keeper of a saloon, and ate and drank freely of foods and liquors which produce gout. In view of the history of the case, I regarded the patient's disease as probably due to uric acid poisoning. He was put on thialion, as directed above, and the arm was rubbed several times daily with aconite liniment. On this treatment, he began to improve at once. In a week, his arm was freely movable and he felt better in every way. I had him use the thialion as an eliminant for a month. At the present writing he has no symptoms of uric acid contamination and is to every appearance in excellent health.

CASE II. This patient, a man of 52, was greatly annoyed by pains in the feet and ankles, and on several occasions he had suffered very excruciating pain in his great toe, thus showing in a marked manner that the attack was purely "gouty." But the history of the case itself was sufficient to make this plain. I lost no time in putting him on thialion, prescribed in the same general way as outlined in the directions as above given. This patient began to improve speedily after the agent had been employed a few days, and his entire recovery followed after thialion had been used for several weeks.

CASE III. This patient, a man of 47, called at the office for a prescription for painful and swollen feet and legs. The man was corpulent, lived high, and had had similar attacks for a long period, but as these were now growing in severity he consulted a physician. His case was clearly one due to uric acid poisoning and he was treated substantially in the same manner as the other patients whose histories are here given. He made an uneventful recovery, which occupied altogether a period of four weeks.

Like the others, this man took thialion as an eliminant and corrective, and adhered to my advice relative to diet and beverages. As a consequence, he is now in better general health than he has been before in ten years.

A CASE OF URIC ACID POISONING.

BY C. H. BROWN, M. D., PHILADELPHIA, PA.

(Reprinted from *Uric Acid Monthly*, May, 1903.)

Mrs. J. K. has for many years been a sufferer from the uric acid diathesis, sometimes better and sometimes worse. She had rheumatism shifting from one part of the body to another; pain in the back, which continued so persistently as to make her apprehensive of kidney disease; flatulence and sour stomach; a weak heart; and insomnia. She felt wretched at times, and always worse in the morning.

She had been treated with all the various remedies that are indicated in such conditions. Salicylate of soda seemed to be of some benefit, but soon disordered the stomach and was discontinued. Piperazine was used at times and apparently afforded relief; but this remedy also disturbed the stomach and seemed to affect the heart, so much so that the patient was afraid to take it. Effervescent lithia tablets also aggravated the gastric disturbances. Bicarbonate of soda was prescribed internally and in the baths in order to neutralize the excessive acidity; but, in spite of all that was done and taken Mrs. K. continued to feel miserable. I had been reading of the wonderful results of thialion in just such conditions, and I had often thought of trying it in this case, but was deterred by the fear that it might be such an unpleasant dose as to disturb the patient's stomach as the other remedies had done. But finally, as I had exhausted all other means, I turned to thialion as a last resort and I am happy to say that it proved an agreeable surprise. Improvement commenced at once. Patient is now taking her fourth bottle and she feels that it is the remedy for her, as there has been an amelioration of all her symptoms. She feels better when she takes it three times a day, as this keeps the bowels and kidneys acting freely. She takes it dissolved in hot water and rather likes the taste of it. It has not disagreed with the stomach in any way. She has been recommending thialion to her friends as the greatest medicine she has ever taken.

THREE INTERESTING CASES.

BY STEPHEN L. REID, M. D., WILSONVILLE, KY.

(Reprinted from *Uric Acid Monthly*, Vol. iv, No. 2.)

The following three cases will prove especially interesting from the fact that notwithstanding they represent types of disorders which are supposed to be widely different in their etiological and pathological character, and have generally been classed in our nomenclature under separate and distinct heads, yet the remarkably successful results obtained from the treatment, which was substantially identical in each case, would strongly point to the same underlying factor as the principal cause; to wit:

CASE I. K. B.; male; aged 38; married; occupation, saw mill hand; four years ago, following an attack of typhoid fever, commenced having pains in thigh and calf muscles, gradually increasing in severity until walking became torture. After a long course of treatment the patient was benefited sufficiently to enable him to resume labor. Last March, after having worked in a cold rain all one day, he developed rheumatism in left wrist; in twenty-four hours the other wrist was effected; forty-eight hours later one knee, and both ankles were attacked, and the patient was confined to the bed. Although he received the best of medical attention, these symptoms continued, with only slight intermissions, for over nine weeks.

At this time my attention was called to the case. A consultation with the attending physician showed that the patient had been receiving ideal treatment, such as the salicylates, salol, colchicum, counter-irritants, etc., but with no permanent benefit. Even if I had not already been prepossessed in favor of thialion, there was nothing left for us to use but it. Patient was ordered to take thialion in quantities sufficient to keep the bowels loose. The inflamed joints were allowed to remain swathed in cotton; all other treatment stopped. On

the third day, improvement was noted by the patient, and on the ninth day he was able to move himself in bed; he could not do this before on account of the pain. He had the attending physician send for me again at this time to learn if I had any further suggestions to offer. Seeing no reason for a change, I made none. To-day, August 31, 1903, this patient is looking the picture of health. He walked into my office, presenting a note from Dr. C., which said: "Patient desires to make application for life insurance. What do you think of his chances?" This man had continued to use thialion until about the middle of August, and stopped on the advice of his physician. I advised him to apply. He did so. The company demanded a re-examination by another physician, and then granted him a policy for \$3,000.

CASE II. Female; aged 17; single; farmer's daughter; does the work usually required of females in the country. She has suffered, especially during the damp, rainy weather, from recurrent attacks of quinsy. These attacks are of a very alarming nature, patient living in continual dread, and fear that she may lose her life. During these attacks she has pains of greater or less severity, flitting from joint to joint. The rheumatic character of the tonsillar affection being self evident, she was placed on full doses of thialion. That was one year ago, November, 1902. Since that time, she has had only one mild attack, lasting three days (Dec. 2 to 5, 1902). Thialion was discontinued March 15th. The weather from that date to the 10th of May, was cold and rainy, and of a character to bring into action any latent rheumatic tendency that may have been lurking in the system. Patient passed through this period with absolutely no signs of her former trouble, and I consider her sound and well.

CASE III. Is one that caused me to lose many hours of needed rest, until the probable solution of the puzzle presented itself.

Mr. C. O. B., painter by trade; married; four children, youngest four years old. Father and mother both alive at advanced age. Four brothers, two sisters, all alive and well. No history of venereal disease, consumption or rheumatism. Smokes a pipe, moderate beer drinker, does not drink whiskey. Bowels very constipated, otherwise health is very good, and has been so for years.

First saw him three months ago at midnight, complaining of shortness of breath, palpitation of heart, and sense of fullness in stomach. Diagnosis, "indigestion," for which treatment was given. He got better and able to go to work, but the uneasy feeling did not leave his stomach entirely. Three weeks later, at about the same hour at night, I saw him again in a similar but more violent attack than the previous one. During the intervals between the two attacks, his habits had been regulated; pipe and beer both stopped; diet received careful supervision; laxatives given for his bowels, etc. In all this man had nine of these attacks before I began to suspect his occupation as painter as being the prime cause. The constitution was suspicious, but the absence of the "wrist-drop" and other physical signs of chronic lead poisoning threw me off.

As soon as I became convinced that I had a case of chronic lead poisoning to deal with, I placed the patient on full doses of thialion. It has now been six weeks since Mr. B. began taking thialion. The attacks ceased promptly, and I believe the patient is sound and well. But I have advised a change of occupation for a year, as a precautionary measure.

VAGUE MUSCULAR PAINS AND ACHEs.

BY G. B. ACKER, M. D., LAURENCEVILLE, PA.

(Abstract from the *Medical Herald*, St. Joseph, Mo.)

Never, perhaps, more than they do at the present time, did patients insist on treatment for the relief of "pains and aches," which they consider to be due to chronic rheumatic conditions of one kind or another. The physician seldom gets a negative answer to the query: "Have you suffered from rheumatism?"—especially if the question be put to the average person over 40 years of age. By the term "rheumatism," however, the patient does not mean to imply that he has suffered from the acutely swollen joint, accompanied by fever causing confinement to bed, which characterizes true acute articular rheumatism; but rather to the commoner form of "vague pains" affecting muscles and nerve sheaths, which may more properly be termed "irregular or abarticulat gout."

We cite below the clinical outlines of two or three cases taken at random from our case-book, as an illustration of this point; to wit:

CASE I. James B., carpenter, aged 45, came to the office, March 3, 1903, complaining of darting pains in arms, back and shoulders, which incapacitated him from his daily work. He attributed his present trouble to exposure, two or three days before, to a cold, damp wind while shingling the roof of a house. He supposed he was "rheumatically" or "grippy," as he had previously had several similar attacks affecting various muscles of the body. Had tried whisky and quinine to "break it up," but had only made matters worse. He now sought medical advice, not only to get relief from his present attack, but to be permanently cured of his supposed rheumatism. His suffering from "aches and pains" had become so frequent that he was unable to perform his work satisfactorily and he was in danger of losing his position.

During the next four or five weeks he returned many times saying that although he appeared to obtain relief on each occasion from the medicine given him, he was certain that he perspired more than common and "caught cold" more readily, having suffered several attacks from his old complaint. He had been given salicylates and antifebrin; and he was probably right in his surmise.

On April 10th, he appeared voluntarily with a sample of his urine, which had caused him some alarm owing to its scalding nature, dark, red color, and heavy brick dust deposit. Examination revealed an enormous quantity of uric acid crystals. The water was also scant and highly acid. Satisfied now that the patient was victim of uricacidæmia, as indicated by this "uric acid explosion," he was at once put upon thialion. On the first day, he was given a teaspoonful, dissolved in a glassful of hot water, an hour before breakfast, this dose being repeated every two hours until four doses were taken, when a remarkably copious and foul-smelling evacuation of the bowels took place. For the next fortnight, the early morning dose only was given.

The improvement was marked from the outset. On April 15th, five days after this eliminative mode of treatment was adopted, the patient reported that he began to feel much less "achy" than heretofore, though, at first, the medicine seemed to make him worse. On May 1st, he returned for another bottle of the "salts," saying that he had felt perfectly well for the past two weeks but wished to keep some of the medicine on hand in case of an emergency. Since taking it his bowels had become much more regular.

CASE II. Mary D., housewife, German-American, aged 42, mother of three children, sent for me Oct. 1, 1903. Found her in bed, suffering muscular pains in back and limbs. She reported that she had had "aches and pains" in various parts of the body for the past ten years, for which she had been given "rheumatism medicine" (oil of wintergreen, phenacetine, etc.), with only slight temporary relief. The present attack was more severe, brought on by a long cold drive into the country a few days before. She concluded it was la grippe. She had always been more or less constipated, and suffered frequently from headaches.

Believing this case to be one of similar nature to that already described above, she was put upon the same treatment and with like satisfactory results. She was apparently worse during the first two or three days, but soon began to improve, and at the end of a week was about the house as usual. She was seen again, Dec. 3rd, when she called for another bottle of medicine, stating that her bowels were now "very regular for her" and that her headaches and "rheumatism" had practically disappeared.

CASE III. Harry F., school-boy, aged 14, complained every night upon going to bed of "aching" all over. Was somewhat "feverish" and would toss about and moan in his sleep. Frequently had "nightmare." Had been troubled this way for three or four months. Felt fairly well during the day, and entered with zeal into all kinds of out door sports with his school-mates. Was usually worse on Saturday, after a day's hard play. Bromides, Dover's powder, etc., had been prescribed with no permanent benefit. Parents had become alarmed

Urinary examination in this case pointed to the advisability of a similar plan of treatment to that adopted in the preceding two cases. After two weeks of such treatment the parents of the lad reported that he was entirely recovered.

HEADACHE AND BACKACHE OF MENSTRUATION.

BY CHARLES A. DUNHAM, M. D., JACKSONVILLE, FLA.

(Abstract from *American Compend*, January, 1904.)

So overwhelming is the majority of women and young girls to-day, who suffer from "headache and backache" as the frequent precursor and constant accompaniment of the menstrual period that there is considerable danger of our being forced to the unwise and unsatisfactory conclusion that such symptoms may be but normal and physiological; and, if this view should be accepted, the physician doing so is in further danger of being led to the course of offering only such temporary relief as may be obtained from the use of sedatives and anodynes. Naturally, he will consider that his duty is done if he succeeds in obtunding the pains during the time in which they necessarily occur, thus enabling the patient to pass through the ordeal with greater ease and comfort.

To illustrate the value of the *solvent and eliminative* mode of treatment in these cases, and the marked therapeutic advantages it possesses over the older palliative means usually employed, we cite briefly here the clinical outlines of a case of menstrual "sick headache" recently treated by both methods; to wit:

Mrs. W., aged 32, a slender brunette of decided nervous temperament, married and mother of four children, had for several years complained that for three or four days prior to each monthly period, she began to suffer intense headache, which warned her of her approaching sickness, and which necessitated complete withdrawal from house-hold duties. She was obliged to retire to a darkened room and remain in bed, while absolute quiet reigned. At the beginning of the menstrual flow, gastric disturbances arose (vomiting, etc.), the head symptoms increased in virulence, the entire surface of the body became cold and the patient relapsed into a semi-comatose condition, alarming to her friends as well as to her physician. Vigorous rubbing of the limbs and body was always resorted to as a necessary means to restore what appeared to be "suspended animation." Brandy and the usual restoratives were applied.

The patient would recover from one of these attacks or seizures, remain in a very weakened condition for a short time and suddenly relapse into another attack lasting for an hour or two. After remaining ill in this way for a week, the patient upon the gradual lessening of the menstrual flux, would cease to have further attacks, but still remain very weak for two or three days. Upon recovery, she went about her house-hold duties as usual for a fortnight, only to repeat the same experience at the coming monthly period.

The treatment in this case had consisted in the taking of analgesics (antifebrin, etc.,) at the onset of the headache, drugs of this character seeming to be her only refuge from the intense suffering at this time. After the commencement of her "spells," attention was directed solely toward restoring consciousness and feeling and an impeded circulation. It was evident, however, that some rational course of treatment should be adopted between the attacks to prevent their recurrence, as the patient was extremely nervous, and her general physical condition undermined. The chief symptoms of which she complained between times were constipation and occasional headaches.

After several years of this suffering and many changes in the treatment at the hands of various physicians who had been consulted, the diagnosis of migraine was made and the solvent and eliminative mode of treatment adopted. Instead of obtunding the pain by means of drugs which paralyzed nature's efforts at eliminating toxic waste, it was decided to directly aid in these efforts by stimulating the natural processes of excretion and employing a solvent which would render removal of the urates prompt and certain, for it was now believed that the serious symptoms in this case were entirely attributable to the retention of colloid urates in the circulation and consequent choking up of the capillaries.

A day or two prior to the time of the expected headache, she was given, the first thing upon arising in the morning an hour before breakfast, a teaspoonful of thialion dissolved in a glassful of hot water, which dose was repeated at two-hourly intervals until four teaspoonfuls had been taken. This caused copious evacuation of the bowels and well marked diuresis. For the ensuing three or four days, only the single morning dose was taken. Though menstruation had now begun, yet the alarming "spell" which had always hitherto accompanied it,

had now degenerated into a slight headache and some vertigo. She passed through the dreaded week with nothing more serious.

The same plan of treatment was adopted at the next period, while occasional doses of the solvent were taken in the interim sufficient to cause fairly free movements of the bowels. The result was even more satisfactory than before. A mild headache was the only symptom. This plan has since been followed regularly for the past three years and, during all that time the patient has failed to suffer one of her old attacks—passing through the monthly ordeal with comparative ease and comfort.

CLEAN OUT THE SEWERS.

BY G. G. WILLIAMS, M. D., CHICAGO, ILL.

(Abstract from the *Alabama Medical Journal*, February, 1904.)

G. B., physician, aged 42, asserted that for ten years he had not felt mentally and physically as a man in ordinary good health ought to feel. He had no organic trouble, but was satisfied that something was wrong, although the only objective physical signs to be discovered were constipation and an occasional overacid urine, scant, highly colored, containing frequent "brick dust" deposits. His subjective symptoms were frequent headaches, "tired feeling," "fits of blues," muscular pains and aches, sleeplessness, poor appetite, mental and sexual torpor. Various tonic and anti-rheumatic drugs had been taken, but the only relief yet obtained was that which followed temporarily from the action of compound cathartic pills. He had, in truth, become almost entirely dependent upon the latter in order to secure a satisfactory bowel movement twice a week.

Believing the doctor to be a sufferer from hepatic insufficiency and the concomitant retention of underoxidized waste of the uric acid type in the circulation, he was advised to try the efficacy of the solvent and eliminative mode of treatment with the new laxative lithia salt, thialin—an anti-uric-acid and cholagogue agent, whose virtue in cleaning out this form of sewage from the system has become well established. At the end of two months he reported himself satisfied that the solution of the problem in his case had been found. Though, during the first few days of treatment the symptoms were somewhat aggravated, yet, as this had been looked for, he continued to follow directions conscientiously, and with the most gratifying results. His bowels were now moving fairly regularly, his headaches gradually disappeared, while mentally, physically and sexually he felt himself equal to any ordinary emergency.

The plan adopted in this case was to take on the first day a teaspoonful of the salt, dissolved in a glassful of hot water, the first thing upon getting out of bed in the morning, repeating the dose every two hours until the bowels moved freely. For the ensuing fortnight two daily doses were taken—morning and evening. During the next two weeks, only the early morning dose was taken. It was then gradually reduced until only two doses were taken per week. Three four ounce bottles were taken in all, and the doctor has now become a firm convert to this simple plan of treatment. He believes, as does the writer, that much of the obscure invalidism so prevalent in modern times may be made to disappear by merely "cleaning out the sewers" of the system.

The writer has treated several chronic cases of so-called "malaria" and "neurasthenia" in this manner, which had previously baffled himself and others; and, though in every instance, the patients reported at first that the symptoms were aggravated, yet eventually they were relieved—sometimes within a month or two, sometimes longer. It is our personal opinion that the successful therapeutic results obtained are due entirely to the fact that the remedy employed aids the metabolic and eliminative organs, liver, kidneys and bowels, in excreting from the body the waste tissue debris which has served as a foreign body to choke the capillaries, as well as a toxic irritant to nerve tissue, thus causing the many and varied symptoms which are so troublesome to doctor and patient alike.

CASE I. Mrs. M., of Buffalo; age, 39; called on me last year with the following symptoms:

A constant loss of flesh; headache persistent. The stomach was irritable, not taking good care of the food ingested; bowels, constipated; tongue, furred; complexion pallid, and general debility. Insomnia was a persistent symptom, as it generally is in this disease. She had also dimness of vision, accompanied by attacks of vertigo.

An examination of the urine revealed the following: Increased flow, much over normal, almost colorless, reaching 94 ounces in the 24 hours; specific gravity, 1.008—the density varied with the quantity, and particular samples passed during the day were much higher than the total quantity. Albumen slight in quantity; sugar, none; phosphates, diminished; reaction, decidedly acid; urea diminished. Under the microscope it showed a few hyaline and granular casts—uric acid crystal numerous.

The pulse was full and hard and showed decided tension. The several cardiac sounds were sharp and loud. She had diarrhoeal attacks, during which she had marked dimness of vision and drowsiness during the day time.

Diagnosis: Interstitial nephritis of uric acid origin.

I put her on a milk diet and ordered regular hot baths, giving internally 1-20 grain of chloride of gold three times a day. A month of this treatment and no improvement was noticeable. A physician friend advised that I use thialion. I prescribed it in teaspoonful doses given in a cup of hot water, as hot as it could be drunk three times daily before meals (one hour), for three days, when the urine showed by the litmus test that it was *nearly alkaline*. The thialion was continued once a day one day and twice a day the next, so that the bowels would not be too free. The improvement began at once, and in two weeks it was very marked, when the urine was diminished to almost normal in quantity; specific gravity, 1.022; urea markedly increased and subjective symptoms had nearly disappeared. At this writing there is no albumen, no casts, and she is feeling better than she has in three years.

CASE II. I. C., age 54, mechanic, had to rise four or five times during the night, and this feature of his case decided him to call upon me for advice. Urine examination showed the specific gravity to be 1.010; very acid; albumen present; no sugar; urea diminished; with hyaline and granular casts. He complained of post cerebral neuralgia, dimness of vision. Pulse was full and hard.

Diagnosis as in the preceding case, and the treatment consisted of thialion given as in case I. In three weeks the urine showed a specific gravity of 1.022, increased urea.

A CURE FOR SLEEPLESSNESS.

BY J. MCFARLIN, M. D., ST. LOUIS, MO.

(Abstract from the *International Journal of Surgery*, August, 1904.)

We believe that the toxic waste of cerebral action should be removed from the system in the same way as toxic waste of muscular action. We should aid the eliminative organs. Frequent examination of the urine in these cases, will show occasional uric acid "explosions" as indicated by the highly colored, acid water, containing an abundance of "brief dust deposit." Nature is here endeavoring to rid herself of the underoxidized waste which has accumulated in excess owing to the heedlessness or laziness of the patient in attending to her calls. In one of his sleepless nights, he will often find it necessary to arise and attend to such calls.

In the treatment of these cases we can do no better than to imitate nature. It is evident that hypnotics, or acid remedies, will not effect a cure. They merely cause the precipitation of the uratic waste salts from the capillaries into the contiguous tissues, thus removing the congestion temporarily. As soon as the immediate effect of the drug is over, reabsorption of these waste salts into the blood occurs, and the patient requires another dose the next night, and so on indefinitely. To *cure* him, we must remove the offending substance from the body entirely. This may require several days, but it is the only rational course to pursue. We must furnish aid in the way of increasing the solubility of uratic waste salts; and, at the same time, effect their removal by stimulating the action of the eliminative organs—kidneys, liver and bowels.

We cite briefly here the outlines of the following interesting case, in which this solvent and eliminative mode of treatment proved successful:

J. B., clothing merchant, aged 45, called to be examined for life insurance. The usual routine examination proved him to be a satisfactory risk and the company was so advised. Mr. B. then stated that he was surprised at my acceptance of him; since he was certain that something serious was wrong with him. Asked to explain, he stated that he had long been a sufferer from insomnia, for which he had been treated without benefit. To get much needed rest, he was obliged to take either sulfona or large doses of bromide two or three nights in the week.

Upon the earnest appeals made by this gentleman, I agreed to attempt a cure of his case. The only objective clinical sign of significance, was a scant, highly colored, acid urine, which according to the patient, would at times become profuse in amount, and contain copious deposits of a reddish-brown powder. He admitted, too, that his bowels were "very irregular,"—that he often skipped two or three days without a movement.

Satisfied that this was a case of autotoxæmia, due to retention of uratic waste products, and that the "sleeplessness" was merely a symptom (the chief one in this instance) of congestion of the cerebral capillaries, the laxative lithia salt, thialion, was at once prescribed for its solvent action, as well as its well-known effect upon liver and bowels. To accomplish this purpose effectually, the salt was given (a heaped teaspoonful dissolved in a glassful of hot water) every two hours, the first day, until free evacuation of the bowels occurred—which was effected soon after the fourth dose, the initial dose being taken immediately upon arising in the morning. For the balance of the week, a teaspoonful was given in the morning, and again just before retiring at night.

At the end of the week, the patient returned for another bottle of the "salts," stating that although he had begun to sleep somewhat better and his bowels moved more regularly, he thought that the medicine caused some "muscular pains" of which he complained during the last four days. Being told that this was to be expected, that it was simply an indication of the withdrawal from the tissues of the toxic waste which was being thus absorbed into the circulation and removed from the body by way of the kidneys, he left with renewed confidence and continued taking the remedy for another fortnight, once daily—early in the morning.

Three weeks after beginning the treatment, Mr. B. called and expressed himself entirely satisfied with the results. He considered himself completely cured. He slept well, his bowels were regular, and he had not felt so well in many years. He was furnished with another supply of the salt, however, and told to take a dose once or twice a week—more especially if any signs of constipation were observed.

Since treating the above case, the writer has obtained equally satisfactory results in many other similar instances, in which sleeplessness was a prominent symptom of uricacidæmia; and, as an outcome of this experience, he has become firmly convinced that the *cure* of these obstinate cases may often be obtained by stimulating and aiding the processes of elimination in this simple manner.

SOME NOTES ON URIC ACID AS A CAUSE OF GASTRIC DISORDERS.

BY WILLIAM H. MURRAY, M. D., DANBURY, CONN.

(Abstract from *The Woman's Medical Journal*, December, 1899.)

It is clear that before we can restore elasticity to the gastric arteries and obtain normal vascular supply, the deposits of uric acid already formed and being formed must be removed, and the overburdened liver assisted in the performance of its duty in order to prevent the formation of any more. The uric acid solvent is therefore required, as well as an hepatic stimulant. For the former purpose lithia has proven itself the most efficient agent, inasmuch as urate of lithia is formed, which is the most soluble of all the uric acid salts and is consequently the most easily excreted by the kidneys. For the second purpose a laxative saline is indicated, one distinctly cholagogue in effect in order to enhance cellular action, excite the flow of bile and initiate intestinal peristalsis. A therapeutic agent which combines within itself both of these essential qualities must be the remedy *par excellence* in the treatment of these cases.

Fortunately we have such a remedy in the laxative salt of lithia, thialion, a drug which has been recently added to our list of standard therapeutic agents, and has already proved itself most efficient in the treatment of the various phases of uricacidæmia.

The following two cases, in which this drug was used with exceptionally gratifying results, were reported to me by a distinguished brother practitioner, and are cited here in illustration of the fact that some of the most distressing cases of stomach disorders may be treated successfully by removing the uric acid toxin, at the same time stimulating the action of both liver and bowels.

"Mrs. M., widow, American, mother of four children, height five ft. seven in., weight 190 pounds, consulted me in regard to trouble of the stomach, which she said had existed for nearly two and a half years, and which had become so alarming and distressing that it had begun to affect her general health. It started, so she said, during a spell of very warm weather, when one extremely hot day, after walking for a considerable distance, she partook of some ice cream—after which she cooled off quickly. Subsequent to this, acute gastritis developed with which she was confined to her bed for two weeks. Since her recovery from this sickness, she has suffered frequent attacks of indigestion, accompanied by the eructations of large quantities of gas. Throughout her life she has been an extremely heavy eater, taking no choice of what she ate; but now she had to be particularly careful in regard to the quality and quantity of her food.

At the time of my first visit to her, she informed me that for an hour after meals, as a rule, gulplings of gas and wind were so great, as not only to cause herself much annoyance, but to annoy everybody else within hearing. But the worst was at night. On retiring, she would go to sleep and after about an hour would awake with a distended stomach—and gulping wind. This would continue for an hour and sometimes longer, until she would become quite exhausted. These gases, as they came up scorched and burned her throat from their excessive acidity. The bowels were not regular—sometimes being loose and at other times constipated. The tongue had a white coating and there was a great deal of frontal headache. On certain days there would be no desire for food whatever. She said that she felt as if the whole digestive tract had been 'pickled in vinegar.'

In this case it was evident that the gastric solvents were much diminished and that the greater portion of the food, being undigested, remained in the stomach as a foreign body, setting up excessive fermentation with the formation of gases. Desiring first of all to relieve the torpid condition of the liver and move the bowels thoroughly, believing also that there might possibly be an excess of uric acid in the blood, owing to her full habits, I directed her to take a teaspoonful of thialion, dissolved in a cupful of hot water (drunk as hot as it could be, all taken down at once) three times daily until she had obtained free movement of the bowels. The first movement occurred after the third dose and a freer one after the fourth dose. To her surprise and delight, after the first dose the eructations of gas became less frequent and at the end of the fifth dose ceased entirely. I then directed her to continue taking a teaspoonful on rising in the morning, three times a week. From this time on improvement was rapid; appetite returned; and, at the end of four weeks, there was no further trouble of any kind. She discontinued the remedy entirely at this date. It is now several months since I treated her and she has remained perfectly well, showing not the slightest return of the former troubles."

The lesson to be learned from this case, is, that oftentimes an excess of uric acid in the blood plays an important part in the digestive tract as well as in complicating diseases of other organs, and there can be no question as to the salutary effect of thialion in this class of cases.

Case No. two was in many respects entirely different from No. one, yet the treatment was the same and the results equally gratifying, to wit:

"Mrs. C., a sallow, anæmic woman, consulted me for extreme debility, belchings of wind and burning in the throat 'when it came up;' together with much distress after eating. The bowels were exceedingly constipated, a movement being procured only about twice a week; and then only by the aid of active cathartics. The appetite was poor, skin sallow and yellow and conjunctiva injected. Liver marks were on the cheeks. In fact, she showed a marked derangement of the liver, not an organic disease but simply torpidity, with an excessive fermentation of food in the stomach.

She was directed to take a teaspoonful of thialion, in hot water as given in the above case, and to report on the third day, which she did. The acidity was much relieved; she had had fairly good movements of the bowels; and the general condition seemed much improved. Being anæmic, I ordered her to take a tablet of feralboid, quinia and strychnia as a tonic, before each meal, and to continue taking the dose of thialion every morning as before. She returned the second week after this when she said that she had had several *large* stools, one of which was very black and foul smelling. Her general health was much improved; appetite was better; the pale, anæmic appearance had disappeared; the eyes had brightened, and the change was marked in every way. The dose of thialion was now reduced to three times a week, then to twice a week, and, finally, at the end of five weeks, to once a week.

It is now four months, and she only takes thialion occasionally. I saw her yesterday and found that she was very much improved in every way. The appetite was excellent; no eructations of gas whatsoever; the bowels were normal, a movement being had every day—a large mushy stool; and the patient was full of gratitude."

RHEUMATISM OF LONG STANDING CURED.

BY L. E. CHAPPELL, M. D., M. E., GRAND RAPIDS, MICH.

(Abstract from *Uric Acid Monthly*, Vol. v; No. 1.)

Believing, as we do, that all rheumatic "aches and pains," and nearly all arthritic inflammations and swellings, are due directly to the irritating presence of uratic deposits in the tissues affected—i. e., in the nerve sheathes, in (or between) the muscle fibres, in the joints, etc., as the case may be—and that these deposits are at first in the colloid form, partially soluble, absorbable, and removable as such from place to place, to be again deposited if not removed from the system—it has always been our aim in the treatment to institute such measures as will effect this said removal from the system. If the case be one of long standing, some of these deposits (especially if in the joints) have doubtless become crystalline in form; but even here, if the proper alkaline solvent and eliminant treatment be employed, they may be reabsorbed and driven from the system.

Such a case recently came under our notice. The patient, Mr. G. P., aged 60, was a painter by occupation. He had had rheumatism for years. He was much worse, however, by spells. During one of these outbursts, his body would become covered with a red eruption (miliary papules) accompanied with considerable itching. At these times, too, his urine would be scant, high colored, over-acid, and loaded with urates.

The knee joints, in this case, were the parts principally affected. They would become inflamed, swollen and painful, necessitating his confinement to bed. His bowels were constipated, and there was some bloating of the abdomen.

For years, this man had been treated in the routine manner, with antirheumatic remedies of an analgesic character; but he was only able to get temporary relief. It was evident that the medicinal agents used failed to effectually remove (1) from the joints, the deposits which gave rise to their irritation, and (2) from the blood, the waste product from which these deposits were formed. To effect a permanent cure in such conditions, a solvent and eliminant of uric acid is indicated: an alkaline agent whose base will unite with and form a soluble salt with uric acid, and which will raise the alkalescence of the blood to a point which will hold such salt in solution; an agent which, at the same time, will stimulate the functional activity of the excretory organs, liver, kidneys and bowels, and thus aid in the elimination of this salt from the system.

One year ago when I first saw this patient, I put him under treatment with a solvent and eliminant agent of the character above described—and with the best of results. I gave him thialion. On the first day, he was given a drachm of the salt, dissolved in a glassful of hot water, the first thing upon arising in the morning, and told to repeat the dose every two hours until four or five doses were taken, or until a free "mushy" movement from the bowels occurred. The same plan was adopted on the second day, after which two daily doses were given morning and night, for a week, and then reduced to the early morning dose. He was instructed to take

sufficient of the salt to keep his bowels soluble and regular, though, otherwise, the above plan was to be adhered to.

I saw the patient a few days ago, and he informed me that he has not had a pain since taking the second bottle. According to his belief "it is the finest thing he ever used," and I judge from what he said that he is now recommending the same medicine to all of his friends. I may say, myself, that I have always had the best of results with it and shall continue to prescribe it whenever it is indicated. I have found that it has a wide field of usefulness outside of rheumatic conditions: and these good results I attribute to the fact that it not only removes uratic deposits from muscles and joints, thus relieving the "aches and pains" of those parts; but that it also acts as an effective cholagogue agent, to stimulate liver and bowels, thus serving to relieve many of the troublesome symptoms due to a "lazy liver" and constipation.

NOCTURNAL CRAMPS.

BY J. DABNEY PALMER, M. D., MONTICELLO, FLA.

(Abstract from *Uric Acid Monthly*, Vol. v; No. 1.)

The beneficial effects of thialion, in nocturnal cramps, are demonstrated by the following interesting case; to wit:

The patient, an old druggist, was 62 years of age when he began using the remedy. For many years he had suffered severely almost every night. The cramps usually began in the ankles soon after the patient retired, and extended up the legs as far as the hips, contracting especially the sartorius muscle. The contractions were so severe that they seemed to endanger the attachment of the muscles, to say nothing of the excruciating pain they caused, and affecting even the cerebellum. As a result, the limbs were so weakened that the patient walked with difficulty, and frequently stumbled. The urine was normal; but the bowels were inclined to be constipated. These attacks were always worse when the patient had eaten more than usual for supper. He also had frequent attacks of indigestion.

After trying various remedies without relief, he concluded that the cramps were caused by the condition of his stomach and bowels, and possibly by an excess of uric acid in the blood. About this time he obtained a bottle of thialion. It seemed to be the very thing he needed; and the speedy alleviation following its use deserves more than a passing notice.

He began taking the remedy at once. His digestion improved, the bowels became more regular, and his appetite increased; in fact, there was a general improvement. He took only one bottle. He is now more fleshy than hitherto, weighs 176 pounds, and has a good appetite, without any disturbance of the stomach.

I am confident that a majority of the cases of nocturnal cramps are dependent upon an abnormal quantity of uric acid in the blood, and may be cured by remedies directed especially to its removal. Such excess of uric acid produces indigestion, accompanied with constipation; and such conditions often cause nocturnal cramps. A laxative salt of lithia would naturally suggest itself, as the most potent, prompt, and certain remedy for the purpose, on account of its forming with the uric acid a soluble salt, easily carried off by the bowels and kidneys. Any method of treatment that successfully eliminates uric acid from the system cannot be too highly commended owing to the deleterious consequences produced by the retention of this waste product in the blood.

SEPT. 5, 1904.

THIALION FOR INFANTS.

BY E. J. LORENZE, M. D., NEW YORK, N. Y.

(Reprint from *Uric Acid Monthly*, Vol. v. No. 1.)

In October, 1902, I delivered a strong, healthy, young Irish woman of an infant, apparently healthy in every respect, weight $7\frac{1}{2}$ lbs., plump and normal. The child nursed the second day and thereafter for about a week. It then began to cry too much. I could discover no apparent cause. On revisiting the little one, I determined, on account of continued crying, to withdraw it from the breast and substitute barley water for twenty-four hours. At the end of this period,

finding no change, I returned the child to the breast. Fever then developed and slight gastric disturbance consisting of occasional vomiting. At this time the mother showed me pink stains on the child's napkins. At every act of micturition, the napkin had a salmon colored stain, sometimes small and sometimes rather large.

Of course, I recognized at once the "brick dust deposit." I immediately gave it an alkaline mixture combined with an opiate. The literature on the subject—especially uric acid diathesis in children—recommends ingestion of water, plenty of water. This infant received all it could hold. It soon became evident however, that water and alkaline treatment would have no effect. The child became worse; temperature rose to 104°; its face was anxious in expression at all times. Its legs were flexed, and often thighs were flexed on the abdomen. The abdomen was usually hard, but no special tenderness on pressure was noticed. Urine continued to show the brick dust stains. After a week of suffering the child died.

About fifteen months later I delivered the mother of another child, which resembled the former in almost every respect. The mother and the father had in the meantime enjoyed good health; neither had any rheumatic or other symptoms of uric acid excess. The mother avoided all spirituous and malt liquors during pregnancy and after.

In about 5 days the infant began with brick dust deposits on its napkin, similar in all respects to those of the other child. Having had some experience recently with thialion with good results, I determined to use it here. The mother received a teaspoonful in a glassful of hot water three times a day, and I administered 10 grs. to the infant three times a day,—the child nursing at the mother's breast. In two days, all stains disappeared from the napkins, and the child developed and remained normal in every respect.

1658 LEXINGTON AVE., SEPT. 5, 1904.

NEURITIC SCIATICA.

BY WILLIAM MEYER, M. D., WEST HOBOKEN, N. J.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 1.)

Patient, carpenter; æt. 34. He was first taken sick 4 years ago, at which time a diagnosis of "neuritic sciatica" was made. When I took charge of the case, the principal symptoms were severe lumbar pains, clonus of right foot, inability to move the limb, and slight rise of temperature—about two degrees. There was complete loss of appetite, and the patient had lost 30 lbs. in one year. He was very sensitive to all kinds of sounds, the slightest noise almost causing a fit of delirium. There was also sensitiveness to light; inclinations to suicide; headache; fixed position in bed, eyes staring at times. The urine was of low specific gravity (1.014) color almost normal, though cloudy, and throwing down a deposit on standing.

There was very severe pain along the course of the sciatic nerve. Even pointing at his hip would cause him to cry from pain. The pain started from the lumbar region, extended around the hip joint and to the groin and testicle, down half way to the knee-joint. Slight pain in the knee-joint and severe pain on the dorsum of foot.

The urine was at times suppressed, and always lacking in the proper amount—sometimes only 20 ounces a day, but never more than 30 to 40. Urea, about 40 grams. No sugar, no albumin present, in six different examinations. Bowels constipated; only moved on treatment.

TREATMENT.

Before I took charge of the case, salicylates, morphia, potassium iodide, and acetanilid, administered internally. Ointments, iodine and various other preparations, applied externally.

When I took charge of the case, I gave the following prescription:

R.	Pot. iodid.,	8	
	Sod. salicyl.,	12	
	Sol. Fowleri.,	6	
	Ess. pepsin., q. s. ad.	90	

M. Sig. Teaspoonful every 4 hours. Externally, ichthylol and iodine, were painted on twice a day. Then I used galvanism and the static spark. The condition, however, grew

worse. I then took him to the hospital, where the sciatic was stretched and the leg put in plaster of Paris for three weeks, during which time there was quite some relief; but, on removing the plaster, and by using the limb, the pain grew worse than before. Morphine was given in heroic doses at the time ($\frac{1}{4}$ to $\frac{1}{2}$ of a grain) with a little relief; but no sleep. Consultations were held, about four or five in all, with specialists and other physicians; but all of them after their treatment failed, pronounced the case incurable.

I then began a new plan of treatment with thialion, in April, 1904. At this stage, a slight jaundice had set in. I gave a teaspoonful of thialion in a glass of hot water on rising, the same dose again at 11 A. M., again at 4 P. M., and again at bed time. The bowels moved about mid-day, on this same day and again at 6 P. M. The next day I gave the same doses. The bowels moved five times that day, and the odor was terrific. On the third day I continued the same doses, and the bowels moved twice—odor normal. The patient slept fairly well on the second night. On the third day, the urine increased to 70 ounces. The patient took only milk on these days.

On the fourth day he asked for solid food, and it was given. The pain was now bearable. He could sit up, which had not happened in six months; but he was too weak to remain up longer than half an hour. The pain was bearable, even after trying to stand on the leg.

On the fifth day, he received but two teaspoonfuls of the remedy in four divided doses, which was continued for the following 10 days. The appetite improved daily, the patient gaining 6 lbs. in these 10 days. No other remedy was given at all.

After ten days the following diet was allowed: Milk in any quantity, lean meat, white meat, vegetables, water in any quantity, mashed potatoes, bread, toast, etc. Forbidden was only: rich soups, pork, potted, cured meats, cheese, liquor.

About the middle of May, the patient was able to leave the house for a walk. There was pain only on change of weather; sleep normal; appetite good; bowels always regular; jaundice entirely disappeared; tenderness about hip had subsided; all symptoms were improving.

In June, he had a slight relapse: but, two weeks prior to that, he had stopped taking the thialion. I ordered the same again, and the attack lasted but three days. This attack, however, was nothing like the previous suffering. He continued taking the thialion until July 15, 1904. Up to date, he has complained of nothing. His entire system is normal.

446 CLINTON AVE., SEPT. 10, 1904.

LITHÆMIC ATTACKS AND RENAL COLIC.

BY JAMES MUNSIE, M. D., CLEVELAND, OHIO.

(Reprint from *Uric Acid Monthly*, Vol. v, No. 1.)

Mr. F., mason contractor, aged 37, had been subject to attacks of lithæmia, off and on, for four years. During one of these lithic or uric acid "storms," he presented the characteristic symptoms: temperature 101°; pulse 94; high arterial tension; severe headache; vertigo; flushed face; tongue coated; breath heavy; acid eructations; heart burn, etc. These symptoms were preceded by great feeling of depression, or what is generally known as "the blues."

At this time, he was passing about 20 ounces of highly colored urine in the twenty-four hours, which on cooling threw down a heavy brick dust sediment. This urine was of high acidity; specific gravity, from 1.030-1.035. The bowels were sluggish a greater part of the time. The treatment, during attack, consisted of emetic doses of apomorphia, hypodermically, until the stomach was thoroughly emptied—followed by large draughts of warm water, containing a few grains of bicarbonate of sodium. Calomel, gr. $\frac{1}{2}$, was given, repeated every fifteen minutes, until six doses had been taken. Four hours later, a saline was given. This was usually all that was necessary *during* an attack.

Between times, an attempt was made to keep the urine alkaline, or at least neutral. His diet was regulated to suit his individual case, and horseback exercise was recommended. In spite of all this, the attacks came on regularly, at last winding up with renal colic.

It was about this time that I commenced the use of thialion, as after his attack of renal colic he complained of an aching and tenderness over the affected side. Placing him on thialion, drachm doses t. i. d., he complained of great pain after the first day and wanted to stop the

"salts," as he called it. However, after his bowels commenced to move off he felt easier. He passed upwards of 62 ounces of urine in twenty-four hours, of good color and normal in reaction.

Mr. F. is now taking one teaspoonful of thialion, in teacupful hot water, before breakfast. He is feeling better than he has for the past six or eight years. He has had no lithæmic attacks, nor colic, in the past six months. His bowels are regular every day; spirits good—and, in fact, he feels that life is once more worth living. I may say in conclusion that this man stood 5 feet 6 inches, and weighed 264 pounds. Since being put on thialion, he has slowly but surely lost weight, much to his own comfort and surprise.

86 QUINBY AVE., SEPT. 1, 1904.

KIDNEY STONES.

BY E. H. HAMILTON, M. D., POONA, INDIA.

(Reprint from *Uric Acid Monthly*, Vol. v, No. 1.)

Mr. H., æt. 45, weight 145, always in an office, was troubled with bloody urine (after any slight exertion) for many years. He was given up by two of the best physicians here.

At the time I began treating him, he was suffering from a dull pain over the right kidney. After a considerable time, he passed a black kidney stone as large as a broad bean; but the trouble seemed to come on again.

Thialion was brought to my notice, and I tried it for the first time. It worked like a charm. With two teaspoonful doses each day, he soon passed six other stones. But with the passing of these stones, the solvent nature of thialion was most marked. The first stone (passed before using thialion) left its mark all along the tract whence it came, causing pain and bloody urine—so much so that it nearly resulted in the death of Mr. H. But after using thialion for about 15 days, the six stones were voided without much pain, and they were as smooth as though polished. One of them was half disintegrated, and caused no pain or trouble whatever in its passage.

I am glad to have found so reliable a remedy. I feel certain, that, with careful dosage, the above case will be entirely freed from uratic deposits. I have found the remedy useful in a number of other troublesome conditions. Obstinate constipation, for instance, yields to it every time.

13 ARSENAL RD., SEPT. 29, 1904.

FREQUENT MICTURITION, HEADACHE, BACKACHE, ETC.

BY L. B. STUART, M. D., VERNONIA, OREGON.

(Reprint from *Uric Acid Monthly*, Vol. v, No. 1.)

Woman, American, housewife, æt. 55; weight 130. She had been ill for five years—following acute typhoid fever. The first symptoms noticeable, were headache and backache. Later symptoms were pain and tenderness in lumbar region, dull, constant headache and sleeplessness. Appetite was not capricious; but there was a wavy-like constipation. Well-marked "uric acid explosions" occurred; while frequent emptying of the bladder at night was a source of great discomfort.

Of the general and local symptoms, the patient complained constantly of dull headache, which, next to frequent micturition, annoyed her the most. She also complained of a weak back; that "tired feeling," never leaving her; no energy. Urinalysis revealed the characteristic "brick dust" deposit. Daily amount of urinary water, 25 oz.; reaction, acid; specific gravity, 1.029. Elimination was faulty, there being but 800 grs. of urinary solids passed daily, or about 400 grs. urea.

Ergot tried and discarded. Elixir valerian, ammon. used to no purpose. Also used and discarded belladonna, antipyrin and acetanilid. The bromides seem to have done most good, until I began using the new uric solvant and eliminant, thialion. This salt took hold in earnest after the first few days, and she is now apparently as well as ever, for a woman of her age. She took altogether ten bottles, but still keeps in the house an extra bottle for fear she may need it.

I find thialion equally efficacious in my malarial cases. Have discarded the old combination of years gone by—quinine and calomel. Have no need of the above since adopting the eliminative treatment with thialion. Let me give it with quinine, or alone, and I get equally good results; but let me discontinue thialion, and the results are disappointing in the extreme. I have demonstrated this time and again to my entire satisfaction.

I am now using the salt in my neuralgic and rheumatic cases with excellent results. Of course, I give tonic treatment in conjunction with it; e. g., iron, quinine and strychnine, nutritious diet, out-door air, exercise, etc.

SEPT. 12, 1904.

AN EYE AFFECTION.

BY E. L. FISH, M. D., WEST VALLEY, N. Y.

(Reprint from *Uric Acid Monthly*, Vol. v, No. 4.)

I have been experimenting a little with thialion, together with my sons, Dr. James B. Fish, Dentist, and Dr. Glenn R. Fish, Oculist. Have been endeavoring to show them wherein the drug will prove beneficial in their practice—i. e., whenever uric acid has to do with impairment of teeth, and when it affects the eyes as I have seen it in men after a "spree."

One of the most striking instances of the application and utility of thialion, as a remedy in uric acid intoxication, came to my hands about one year ago; and, as thialion was the only remedy used, excepting a few doses of *avena sativa*, we are bound to give full credit to the remedy.

For some time, I have noted a peculiar condition of the eyes, when an excess of uric acid is present in the system. Patients express the sensation "as of one looking at the bright noon-day sunshine"—an extremely disagreeable condition, and, in the case I am about to describe, so pronounced as to render the patient entirely unable to use the eyes for any kind of work.

CASE. Female; age 51 years; American; married; no children; occupation, music teacher; stout build; weight, 155 lbs.; height, five feet, five inches; gray eyes, brown hair, and sedentary habits.

About one year before I saw her, she was living in the state of Connecticut. Her health at that time became slightly impaired by mental worry over her husband's condition (paralytic). She suddenly noticed that she was passing but little urine; was indisposed; had headaches and vertigo, with more or less insomnia. Her condition continued to grow worse, and she decided to go to St. Luke's Hospital in New York. On the day that she was to go, and when dressing for the journey, she began to void large quantities of light-colored urine—at first, but afterward becoming dark and irritating. This continued, so that she was obliged to have a receptacle in the carriage and on the train. This condition lasted for about eighteen hours. She was put into the ward for eye cases and examined by the surgeon in charge who told her there was nothing the matter with her eyes, and that she needed no treatment for them. She remained in the hospital for one week, and returned home in good condition, with sight restored.

URIC ACID EXPLOSION.

A few months later, this lady came to her old home in New York State, and came under my care, giving me the following history of two months' previous: Had been very nervous and could not sleep; much headache and vertigo; and very scanty urine. Her physician had prescribed potassium bromide, at night, and, when she had been unable to sleep, she had sometimes taken grs. XXX or more.

The patient was large and bloated. Her face was very full and puffy, and of a purplish hue. Her eyes seemed bulged and staring, suffused with tears, and the lids very red and irritated. There was intolerance of strong light. The secretions from the kidneys were very scanty—sometimes not more than twelve or sixteen ounces in the 24 hours.

I began the treatment with thialion, in fair doses, and gave nothing else, except a few doses of *avena sativa*, at nights for rest. I continued the medicine for one month, at the expiration of which time she seemed as well as ever, and has remained so since—up to the present time. I give all the credit in this case to thialion, and shall continue to use it in my practice, in all appropriate cases.

MARCH 23, 1905.

CASE OF LUMBAGO.

BY A. J. ZOBEL, M. D., SAN FRANCISCO, CAL.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 4.)

I submit report of a case here, with the successful use of thialion, which I trust will be of interest. The case was particularly interesting to me on account of the patient being one of a family of four people whom I had treated, and in whose cases a diagnosis of uric acid toxæmia had been made with the happiest results, when appropriate treatment was instituted.

CASE. A. O.; male; single; æt. 38; commercial traveller.

Diagnosis: Uric acid toxæmia—with hepatic insufficiency and lumbago.

Family History: Good. Negative, as to diseases of heart, lungs, brain or hereditary disorders.

Past History: Has had "bilious attacks" and constipation for several years back. Has had several attacks of lumbago.

Present History: While traveling up the coast on a steamer, was obliged to sleep on deck; and, since then, has had severe pain in back, which is accentuated whenever he arises from a sitting or recumbent posture. Has an intense metallic taste in mouth. Has been very constipated; bowels only moving when a cathartic is taken. Tongue is always heavily coated, and at times he has to scrape it in order to cleanse it. Appetite, rather capricious. Headaches. His disposition, is becoming "cranky," as the members of his family term it.

Examination: The patient is well nourished and developed—a little too stout for his height. Face very florid, the superficial venous capillaries being dilated and prominent. Tongue, full and flabby, and heavily coated to the tip with yellowish tinged fur. Heart tones clear, but rather weak; rhythm perfect. Lungs, normal. Liver enlarged—about half-inch below costal border. Spleen, not palpable. Abdomen, pendulous; dilation of venous capillaries along lower border of ribs over region of liver. Soreness in muscles of lumbar region, elicited on deep palpation. **Urine:** 1.030; reddish-yellow in color; cloudy; acid reaction—cloudiness clears up on heating, heavy deposit on standing.

Treatment: Use of hot-air apparatus to back. Calomel and soda, gr. ss, every half hour, for six doses, followed by saline in the morning. Thialion, 3 j. in hot water, before breakfast and supper. Besides these measures, the patient was put on a milk diet for three days and encouraged to partake freely of water.

Improvement in the lumbago was prompt, but it was nearly a month before the tongue became clean and the bowels moved with regularity. The patient was ordered to decrease the dose of thialion to a drachm in hot water at bedtime, and to take it in this way for some time. For the past eighteen months, he has been in excellent health, and the final results can be termed most satisfactory.

The thialion was prescribed in this case owing to the fact that, as stated previously, the patient's mother and two brothers had been under my care before; and, from an intimate knowledge of their mode of living,—they being hearty and rich livers and leading sedentary lives—a diagnosis of "uric acid" or "gouty" diathesis had been made in their cases, and upon the use of thialion their condition improved.

In the case of one of the brothers, there was a transitory albuminuria, which would come on after indiscretion in diet, but would clear up as soon as a course of thialion was persisted in. This brother passed a satisfactory examination for life insurance, after several months' use of thialion.

The other brother had an obstinate skin lesion on the inner surfaces of the thighs and on the scrotum; and this yielded to treatment only after thialion was used.

In the case of the mother, a stout, elderly lady, inclined to indulge too freely in all the good things which grace the tables of the well-to-do, an obstinate sciatica made life miserable to her for nearly two months, and finally necessitated her being put to bed with the limb immobilized in a plaster cast. This latter procedure, plus the free use of thialion, finally effected relief *and a cure*.

1403 CALIFORNIA ST.

March 24, 1905.

THIALION IN OPTOMETRY.

BY GLENN R. FISH, M. D. (Oculist), WEST VALLEY, N. Y.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 4.)

Some time ago, my father, Dr. E. L. Fish, called my attention to the occasional effect produced upon the eyes, by the presence of an excess of uric acid in the blood, and requested me to investigate the matter and carefully observe conditions, which I did. After waiting patiently for an experimental case, one presented itself about a month ago, which in my estimation explains some of the peculiar conditions of the eye which quite frequently confront the optometrist.

As occurs to me sometimes, it not infrequently happens that it is almost impossible to refract satisfactorily a case presenting some apparent anomaly of the eye, and which perhaps after a few days, or a week, can be corrected with very little difficulty. Most opticians attribute this trouble to "nervousness"; but I am convinced that, in the absence of known cause for nerve irritation, it is fair (with existing symptoms present) to attribute it to uric acid excess in the blood.

CASE. J. W. Male. Age, 28. Weight, 175. Teamster. He came to my office, March 2, 1905, complaining that he had broken or lost his glasses, and declaring that he could hardly see anything without them. He was just getting over a "bat," as he expressed it. His eyes were very red and irritated; lids, swollen; intolerance to light, and rapid dilation and contraction of the pupil. He could scarcely read 20-30, and then again could barely see the test chart.

After spending a half hour on the patient, without results, I recommended that he consult Dr. E. L. Fish, and undergo a course of treatment with thialion for uric acid poisoning. After only three and one-half days' treatment with this drug, he came to me, and the correction was made in a very short time.

The patient volunteered the information that his urine was almost black when the "Old Dock" began giving him that "great stuff," as he called the medicine. He is a man of intelligence, and was very enthusiastic in his praises of the "medicine" and the great good it did him.

April 3, 1905.

GOUTY MANIFESTATIONS.

BY JAMES BURNET, CH. B., M. R. C. P., EDINBURGH, SCOTLAND.

Editor Therap. Sect. *The Medical Times*: Phys. Marshall St. Provid. Disp.; Senior Clin. Tutor Med. Wards Roy. Inf.; Regist. Roy. Hosp. for Sick Child., Edin., Etc.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 4.)

R. M., æt. 63. Retired civil servant. Very gouty subject. Complained of severe gripping pains in the abdomen, which had lasted for three days. These pains were not aggravated after meals, but became worse as a rule towards night. The tongue was coated, and the breath foul. The pulse was somewhat rapid and irregular.

Palpation of the abdomen was painful, but physical examination was otherwise negative. The appetite was poor, and thirst was great. The heart was normal, but the first sound in the mitral area was impure. The patient had never had an attack like this before, although he had previously had typical gouty seizures and was a martyr to migraine. There was no constipation, the bowels moving regularly and freely every morning.

The urine was scanty and high colored. The specific gravity was 1.025, and the reaction extremely acid. It was loaded with urates. The patient occasionally experienced a slight burning sensation during micturition. There was no albumen present.

He was put upon a carefully selected diet, which included fish, chicken, eggs, vegetables and abundance of milk and fruit. Butcher's meat was entirely cut off, as were also tea and all forms of alcohol. He was also ordered dram doses of thialion, to be taken in a glassful of hot water thrice daily. This had the effect of producing a somewhat loose action of the bowels almost immediately.

Two days after the treatment was begun, the pain on micturition entirely ceased, and the urine became less acid, while it was more copious and much paler in color. At the end of a week, the patient no longer felt the gripping pains in the abdomen for which he had consulted me. He said he felt better than he had done for a long time.

He was now directed to take the thialion once daily only, early in the morning. He continued doing so for a fortnight. He is now perfectly well, and free from headache. The diet is

still enforced, and he takes a dose of thialion twice a week in order to keep up its eliminative effect.

This case is one of a few in which I have used this remedy with considerable success. It is, in my opinion, worth a trial in similar cases of gout and its varied manifestations.

20 POLWARTH CRESCENT.

April 3, 1905.

REPORT OF A CASE OF GASTRORRHAGIA WITH HÆMATEMESIS AND MELÆNA.

BY ALBERT L. CLARKE, M. D., BROOKLYN, N. Y.

(Reprint from *Uric Acid Monthly*, Vol. v: No. 4.)

The patient, male, J. K. G., aged 52, lawyer by occupation, had been actively employed during the day and was wakened suddenly from his sleep about two hours after retiring for the night, by intense nausea. He arose from his bed, and attempted to vomit, but was rendered so faint by his efforts that he immediately threw himself prone on the bed and requested his wife to get him a receptacle in which to vomit. He vomited at once a large amount and was relieved of his nausea, so that he very soon slept and rested well the remainder of the night. In the morning he noticed that he was extremely pale and somewhat weak, but suspected nothing, only that he had probably eaten something indigestible.

This was on Feb. 1, 1905. The next day, his wife mentioned the circumstance that what he had vomited looked like coffee grounds, and asked him if he had drunk coffee the previous evening. It so happened that he had not done so, and he was at a loss to conceive what could have caused the peculiar condition of the vomitus. He suspected a hemorrhage.

The patient attended to his usual duties until the evening of Feb. 3rd, when increasing weakness alarmed him and he sent for me. Shortly before I arrived he passed three or four large stools of a tarry character accompanied by a peculiar smelling gas. My diagnosis was gastric hemorrhage; but I was uncertain as to the cause of it. I found the patient to be a man well-nourished; but markedly anæmic in appearance as the result of the loss of blood.

The family history of the patient was good, the father and mother living to be over 80 years old. His four children were in vigorous health.

The man gave a history, dating back to late boyhood, of having suffered occasionally for weeks and months at a time, with pain in the epigastric region, extending to the back; but with no nausea nor vomiting. Sometimes years would elapse between these attacks. His appetite at such times was generally good. The pain would come on several hours after a meal (frequently during the night) hours after retiring. Once, about twenty years ago, after suffering severely, a physician prescribed calomel in a large dose, and improvement commenced almost immediately, so that it was tried in other attacks with benefit.

The present illness was preceded by pain of a few weeks' duration, in character like all of the other attacks, but not so severe as formerly; in fact, the pains did not come on so often as hitherto. About the time the trouble first commenced (that is, when the patient was sixteen or eighteen years of age) he noticed an acid taste in his mouth, which has continued more or less all of these 35 years. Otherwise the man was healthy. The heart, lungs and kidneys were examined and found normal. No tenderness could be elicited by pressure at any point on the abdomen. The patient's bowels are inclined to be somewhat constipated. The superficial arteries are normal for a man of his age, and presumably the deeper arteries. He has itching of the anus at times; rarely suffers from headache; and ordinarily eats and sleeps well.

My diagnosis was ulcer, or at least an abrasion of the mucous membrane of the stomach, together with hyperæmia of the liver due to improper diet and faulty mastication of food, as the patient was a great lover of sweets and pastry and indulged excessively in them, and he also ate hurriedly. I considered the ulcer or abrasion due to a highly *acid* gastric fluid; and, as he suffered somewhat from itching of the anus and was benefited by calomel when he had gastric pain, I attributed part of his trouble to a congested liver. I forgot to state that the man had suffered from nocturnal enuresis from infancy to about the age of fifteen, and all of his children have been constant bed-wetters.

My treatment was ten grains of subnitrate of bismuth and ten grains of calcined magnesia, in powder, every three hours; also two grains of suprarenal capsule, every three hours, for two weeks, with strict injunctions to remain in bed. The diet consisted of three pints of milk predigested with Fairchild's peptonizing powders, every 24 hours, a glassful at a time, and nothing else except water. The colon and rectum were flushed out to remove any blood. The patient continued to suffer pains at times (in the epigastric and hypochondriac regions) of a cutting character, during these two weeks; but his condition was somewhat improved.

At this time, I examined his urine and found it of a specific gravity of 1.025, and heavily loaded with the urates. This led me to infer that we had a condition of lithæmia or uricacidæmia to contend with. The acid taste in the mouth was still noticed by the patient, and that strengthened my conviction. I accordingly placed him on thialion, a teaspoonful in a glassful of hot water every three hours until the bowels were well flushed, then a teaspoonful in the same amount of water morning and evening.

The patient has now used a number of bottles and is in better health than he has been before in many years. The sour taste in his mouth has disappeared. The color has returned to his cheeks and he looks well and hearty. He attributes his good condition to thialion. He also has not suffered from itching of the anus since he commenced to use the salt. At present, he takes a teaspoonful of thialion every other morning.

100 NASSAU AVE., MAY 12, 1905.

ACUTE NEPHRITIS; ECLAMPSIA.

BY J. G. STEINER, M. D., KNOXDALE, PA.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 4.)

Miss C.; aged eighteen; single; primipara; confined and delivered by the aid of forceps while in convulsions, which I found due to an acute attack of Bright's disease.

Veins were distended, and the entire body was in a dropsical condition—the swelling extending to the feet. The urine, at first, was totally suppressed, and when finally seen was not only scanty, but like thick milk. Albumen abundant.

The patient complained of a "soreness" throughout the entire body. She was tired, weary, and in a semi-comatose condition. Bowels constipated. No appetite.

The treatment was symptomatic, plus heroic dosage with thialion. The latter was crowded until the bowels were thoroughly emptied, after which it was continued in large doses, *t. i. d.*, two hours after meals.

The patient was seen every day for a fortnight. She showed signs of improvement on the second day, when she began to revive. The kidneys became active, the urine profuse and gradually assumed a normal condition.

At the end of two weeks, no trace of albumen was left. Appetite returned. Swelling subsided. Bowels became regular, and the patient was discharged cured.

After her recovery, the young woman married, and was quite well when last seen. There has been no return of the nephritis. So much for thialion.

The question of chief interest to the inquiring mind in this case, is why thialion should have proven itself so immediately beneficial. At least, this is the question that engaged my attention during the week the patient was recovering. Judging from the most prominent effect it produced—the cleaning out of the intestinal and genito-urinary tracts—the answer would seem to be found in the single word, ELIMINATION.

The awakened activity of the kidneys, as shown by the flow of urine; the stimulation of the liver, as indicated by the character and amount of the discharges from the bowels—point to the fact that the symptoms were caused by retention of waste elements which should have been eliminated by way of these two channels, and that relief occurred as soon as the exit was opened and the removal of this waste assured.

The theory of autointoxication by the irritant action of retained urinary solids, is the one now most generally accepted in discussing the etiology of this complaint, and if we are to judge from the solvent and eliminant action of the remedy used in this instance, it is the correct one. Whether the nephritis precedes and causes the convulsions, or whether both con-

ditions are caused by the same factor and at the same time, can make no material difference in the treatment. Our object is to furnish a chemical solvent of the retained waste salts, and at the same time to aid the organs of elimination in effecting their removal: and this is apparently what thialion does.

MAY, 12, 1905.

"DIZZY SPELLS," FOLLOWED BY HEADACHE.

BY H. G. IRVINE, M. D., MINNEAPOLIS, MINN.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 4.)

The following case, I wish to report for two reasons: first, because it was an interesting one from several standpoints; and second, because I think the remedy used deserves some credit.

CASE: Male; age 19; occupation, stenographer.

DIAGNOSIS: Uric acid diathesis; the first indication of trouble occurring about a year previous to his first visit to me.

The history of the case is quite interesting, and as he gave it to me is briefly as follows: During the past year, he has had three or four "spells." When these came on, he would first experience a dizzy sensation and then a sort of sleepy feeling or numbness would creep over the extremities. This lasted always less than an hour and would be followed by a general feeling of lassitude and a very severe headache. Motor impulses were not affected and there was no loss of consciousness. There would be occasional dizzy headaches between spells; but the patient complained of nothing else.

Physical examination revealed nothing abnormal. Questioning brought out the fact that he was inclined to be constipated, that he took no outdoor exercise, drank little water, and indulged in a "rich" diet, consisting largely of vegetables and lots of sweets—almost no meat. No tobacco, nor liquor in any form was taken.

At the time of the "spells," the patient noted that his urine seemed "strong" and had considerable odor. Examination showed brick dust deposits at times, and a very large amount of uric acid crystals on standing, especially if dilute nitric acid were added. Otherwise negative.

Treatment consisted of correcting a slight eye strain—a plus .25 diopter in one eye and a —.25 in the other, at axis 90°—putting him on a plain nutritious diet, plenty of outdoor exercise and the ingestion of considerable water between meals.

The medication consisted of a tonic of iron, quinine and strychnine, *plus thialion*. The latter was given at first, a heaping teaspoonful in half a glassful of hot water before meals, then night and morning, and now, after two months' treatment, a teaspoonful in the morning three or four times a week.

At the present time the urine shows nothing abnormal, and the patient has had no so-called "spells." He has had a dizzy sensation once or twice, lasting only a moment. Generally speaking, however, he feels entirely well.

Three or four points stand out prominently in looking over this case, which, in my experience, are characteristic of such conditions; viz.: A very one-sided diet, the drinking of little water; and almost no outdoor exercise. The careful correction of these usually goes a long way toward relieving the symptoms.

MAY 13, 1905.

URIC ACID EXPLOSION.

BY J. W. YOUNG, M. D., WEST GROVE, IOWA.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 4.)

CASE. Mr. C. Age 22. Farmer.

PREVIOUS HISTORY: Similar attacks have occurred before, principally when overworked. Generally sick in harvest time.

PRESENT ILLNESS: On Saturday, after a hard day's work, he complained of headache and loss of appetite. Later, he felt feverish and vomited considerable mucus, greenish in color Sunday, at 9 A. M., he had a chill, followed by rise of temperature. Continued vomiting.

EXAMINATION: Temperature, 104. Pulse, 98. Respiration, 22. Lungs and heart, normal. Liver, congested and tender. Splenic dulness enlarged. Abdomen, somewhat tender upon palpation. Skin, yellow. Bowels, constipated. Blood examination negative as to parasites.

URINE: High colored; specific gravity, 1.042. After standing a few minutes, there was a large "brick-dust" precipitate. Microscopical examination showed great number of uric acid crystals,—otherwise negative. Slight trace of albumen; no sugar.

TREATMENT: Thialion, a teaspoonful dissolved in glassful hot water, every two hours, until four doses were taken. Then every four hours. An antipyretic powder, every two hours, until temperature was reduced. Exclusive milk diet. Large amount of water at frequent intervals.

RESULTS: Pain ceased after the second dose of antipyretic. Bowels began to move after the fourth dose of thialion. On Monday, the morning temperature and pulse were normal. Urine increased in quantity; sp. gr., 1.023; no brick-dust precipitation. No crystals of uric acid present, on microscopical examination. The treatment was continued, by taking thialion three times a day, for two days; then once a day for a week; and then two doses per week for six weeks.

This attack occurred eighteen months ago; and instead of having a recurrence of the attack every two months as heretofore, he has escaped them entirely by means of a slightly restricted diet and the use of a few doses of thialion every six or eight weeks.

MAY 13, 1905.

"MUSCULAR RHEUMATISM," FOLLOWED BY PERIODIC ATTACKS OF MYASTHENIA AND TRANSIENT LOSS OF CONSCIOUSNESS—OF UNDOUBTED LITHEMIC ORIGIN.

BY R. J. DANNER, M. D., ELNORA, IND.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 6.)

Sam H., laborer, aged 35 years, consulted me June 6, 1905. He had been treated some time previously for a trouble coming on suddenly, and which had been diagnosed as "muscular rheumatism." The treatment, extending over a long period, seemed to do little or no good; and when he was finally able to leave his bed, he gained strength very slowly.

He stated his case to me as follows:

Since leaving his bed, he had constantly been troubled with pain and soreness over the sternum, at the junction of the gladiolus (middle piece) and ensiform appendix, which pain seemed to him to extend backward and upward through the body to a point near the inferior angle of the left scapula, where there was another area which was intermittently painful.

About once in three weeks he had an attack characterized by nausea, vertigo and unconsciousness, the latter lasting from a few minutes to an hour or two. He also suffered general muscular weakness and inability to work, and feared that he might become subject to "fits."

The skin looked sallow and the tongue carried a creamy white coat; the bowels were alternately constipated and loose, and the action of the kidneys was indifferent, only 40 ounces (approximately) of urine being passed in the 24 hours. This secretion, or excretion as you may prefer, was found to be strongly acid in reaction, with a somewhat putrid odor, and on standing deposited a quantity of urates and free uric acid. Its specific gravity was 1.025; color, red; and it produced considerable irritation in passing. Microscopic examination showed nothing remarkable, excepting the unusual amount of uric acid crystals.

Physical examination showed viscera apparently normal; it being noted only that the heart sounds seemed to lack distinctness, and that the stomach and bowels were slightly distended with gas.

I regarded his symptoms as probably due, in some measure, at least, to the condition comprehended in the term "lithemia."

Never having made use of thialion, I concluded to try it in this case, where the indication seemed perfect, according to my preconceived opinions regarding its usefulness. The patient was put on teaspoonful doses, given in hot water, each two hours, until free watery stools should be produced, then each four hours, in same manner, to keep bowels loose. Counter-irritation over sore spots was used for immediate relief, and results awaited.

The bowels had moved freely with the first four doses of thialion, after which the urine promptly cleared up and increased in quantity up to 60 ounces in the 24 hours.

After two days the pains and soreness disappeared, and the appetite, which had previously been poor, increased—the general condition seeming much improved.

He was directed to continue the use of the remedy, taking it three times daily, which he did for ten days, when he reported himself "cured." I prevailed upon him to use thialion intermittently, which he did until a short time ago. He now claims to feel as well as he formerly did, when, as he said, he was "the best man on the works."

SEPT. 8, 1905.

A CASE HISTORY.

BY ROBERT LUMLEY, M. D., WATSEKA, ILL.

(Abstract from *Uric Acid Monthly*, Vol. v; No. 6.)

Publication was of course, unthought of when the record of this case was kept, hence it is not so full or complete as would otherwise have been the case. Nevertheless, I think it will be found sufficiently clear and accurate for all practical purposes; to wit:

Miss G. L., school teacher, then aged 27, first consulted me about two years ago. She complained of constipation, capricious appetite, frequent headaches, extreme nervousness, great fatigue on slight exertion, and feared she would be compelled to resign her position.

Physical examination revealed nothing which explained the foregoing symptoms; but finding a slight conjunctivitis, I referred her to an ophthalmologist, who fitted her with glasses to relieve an alleged "eye strain."

Urinalysis revealed the following; viz: Color, reddish-yellow; reaction, overacid: specific gravity, 1.032; albumen, none; sugar, none. Microscopic examination of the sediment showed typical uric acid crystals and amorphous urates. I failed to get a 24 hours' specimen of the urine, but learned that the secretion was scanty.

I regulated the diet; excluded meat, excepting once daily, also coffee, and instructed her to drink plenty of good water, milk or buttermilk. I advised outdoor exercise, and a daily cold sponge bath, followed by a brisk rub, and prescribed the following:

B Lithia citratis, gr. v.
Potassii bicarbonatis, gr. xv.
Sodii bicarbonatis, gr. x.
Acetanilid, gr. iii.

M. Sig. The whole to be taken at one dose, in effervescent solution, four times daily. Under the foregoing treatment, she improved considerably and was enabled to continue her work in reasonable comfort.

Eight months later, however, an acute arthritis affected the right knee. The joint became inflamed, red, swollen, exquisitely painful and tender. The temperature jumped up to 104 F.; pulse, 140. The urine was reduced in amount, of high specific gravity, high colored, very acid and showed a trace of albumen, and, when cool, a copious deposit of urates.

The next nine weeks taxed the patience of the patient and my knowledge of therapeutics. I tried nearly everything in the *materia medica*, from salicylate of soda internally to a cantharides plaster externally, without much benefit. The fly blister changed the location of the arthritis from the right knee to the left, but had no other perceptible effect.

Finally, some literature on thialion fell into my hands and I decided to give the salt a trial, chiefly because I knew not what else to do. I put her on a teaspoonful of thialion, dissolved in a cupful of hot water, every four hours, and a diet of milk exclusively. The only other medicine, given at the same time as the thialion, was a migraine tablet every four hours on the first day of the solvent treatment.

When I next saw the woman, after she began to take the thialion, she had taken only four doses of the salt, but the change was almost miraculous. Her pain was gone, the pulse and temperature were normal, the swelling of the joint was lessened, the quantity of urine voided had increased, and the bowels had moved freely.

From this time on, she made an uninterrupted recovery. On the third day, the thialion was reduced to a teaspoonful three times daily; after three days more, to once daily for two weeks; then a dose every second day for a month longer. She had no subsequent attacks, and with the exception of a ferruginous tonic for her anaemia, she has taken no medicine since that time. She considers herself cured.

I omitted to state that the brickdust (uric acid) sediment, formerly present in the bottom of the vessel which held the urine, disappeared entirely after the administration of thialion, and has not since returned.

SEPT. 9, 1905.

GOUTY SCIATICA.

BY CHAS. M. COLLINS, M. D., MAQUOKETA, IOWA.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 6.)

Male; age, 45; weight 250, and built in proportion—a clothing merchant.

This man is on his feet a great portion of the time. He uses tobacco, mostly smoking; some liquor, mostly wines. A great user of carbonated waters. He is not given to taking much exercise.

About five or six years ago, he was taken with cramps in calves of the legs. The pain slowly ascended to the hip. He tells me that he was on a hunting trip, camping out along the

river, and got quite wet several times, which he thinks was the primal cause of the trouble. The physicians, whom he consulted at the time, called it "rheumatism." He was saturated with salicylates, *et cetera*, with no effect. He then tried the Mud Springs; but with only temporary relief. He went from one doctor to another, visited all the principal "Springs" and health resorts in America; but without beneficial results. He then gave up doctors and tried every prescription any one would give him, until finally, his kidneys got in "bad shape" and began to worry him.

Two years ago, he came to me. Upon examination, I found the following: Abdomen very large and bloated. Constipated—requiring a large amount of physic to do any good. Appetite variable—a craving for pork. Had tried all diet methods known, but without results. Restless and sleepless. Kidneys acting freely under medicine (oil of hemlock), but would almost stop when not taking it. A heavy brickdust sediment in the vessel. Much burning and discomfort upon voiding the urine. Eyes bothered. Became what his wife called, "very cranky." Lost interest in most things but his business.

I first cleaned out his stomach, and had him drink unboiled coffee and buttermilk. He was ordered to let alone meats and salt. (The latter, I find, will precipitate uric acid.) Static surging gave him his first real relief, but he would not stick to it as it caused him pain. No medicine I gave would seem to have any noticeable effect, excepting, perhaps, to ameliorate the burning of the urine. The pain along the course of the great sciatic nerve trunk was so intense that he got but little relief or comfort. He was compelled to walk with a cane, much against his pride.

Just at this time, a copy of the *Uric Acid Monthly* came into my hands, and, as you may imagine, I at once put him on thialion. It seemed rather expensive compared with other salts I had used, but he was rich and could stand for it. The first bottle didn't seem to have any appreciable effect, excepting to act some on the bowels; but I kept him right at it. The second bottle brought marked improvement, and the FOURTH was the final.

The patient is now apparently cured. He hasn't found it necessary to take any medicine for over six months. So much forthialion.

SEPT. 9, 1905.

HEPATIC CONGESTION AND LUMBAGO.

BY J. E. WAGNER, M. D., PARIS, OHIO.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 6.)

1. PATIENT: Male; aged 39; married; farmer.
2. DIAGNOSIS: Uric acid toxæmia, with congestion of liver and lumbago.
3. FAMILY HISTORY: Good. Negative as to disease of lungs, heart and brain.
4. PAST HISTORY: Has had frequent "bilious attacks;" chronic constipation; and often severe headache and backache.
5. URINALYSIS: Gravity, frequently 1.035 and above; upon standing, "brick dust" deposits. Microscopical examination revealed uric acid crystals in great quantity.
6. TREATMENT: Thialion, a teaspoonful dissolved in glassful of hot water, every two hours, until four doses were given, which acted well on the bowels—then dose repeated every four hours. Prescribed large amount of water at frequent intervals. Gave milk only, for several days. Moderate exercise for about three weeks.
7. RESULT: After four days, the headache began to abate and gradually faded away. The back pains began to lessen; the bowels became regular in action; specific gravity became lower, as the quantity of urine increased. No more "brickdust" precipitation.

Treatment was continued by giving three doses of thialion per day for three weeks, when the patient evinced his satisfaction by saying: "I feel like a new man."

The remedy certainly worked wonders in this instance; but still no greater than I have known it to do in several other cases of a similar character. I am positive that the salt will do all that is claimed for it, and I shall continue to employ the same treatment whenever indicated; for I am satisfied that there is no other remedy its equal when applied in the proper case.

In conclusion, I wish to state that the above is the history of only one of many cases successfully treated by the use of thialion.

SEPT. 11, 1905.

GRAVEL.

BY J. W. SHELLCROFT, M. D., PARKERSBURG, W. VA.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

On Sept. 15, 1904, a young man, æt. 35, hod-carrier by occupation, called at my office, suffering greatly. On examination, I elicited the following summary of his symptoms; to wit:

Severe pain in stomach, after eating; sour belching every few minutes; sometimes, excessive vomiting. There was considerable irritation of bladder and kidneys, with bloody

discharge after urination followed by a very severe pain radiating from the meatus urinarius up both groins to the epigastric region. The urinary water was very scant—20 ounces in 24 hours,—highly colored; overacid; sp. gr. 1.035–1.040; no albumen nor sugar, but very heavy “brick-dust” deposit. Bowels were constipated, and there was marked insomnia.

The patient had complained of the above symptoms, off and on, for 4 years; and had consulted quite a number of physicians, without success. I placed him on the usual alkaline treatment for some time with but very slight results. He became dissatisfied; and, as improvement was slow, I decided to call in a brother practitioner in consultation. We went over the history of the case carefully, and made an examination of his urine the second time. Irritation from uric acid crystals was our diagnosis.

We put our man on thialion, a heaped teaspoonful in a cupful of hot water, t. i. d., before meals, and at bed-time; also cautioned him against meat and alcoholic drinks. We recommended a milk diet. It wasn't long before liver and kidneys became active, and the intestinal canal and genito-urinary tract were thoroughly flushed out. The young man was kept on this treatment for three months, off and on. The bowels became regular; the urine increased to about 45 ounces per day; the burning sensation, with pain and bloody discharge after urination, entirely disappeared. The patient was soon able to get out and work for his family of wife and four children, and at present writing hasn't a single one of the symptoms from which he had been so long a sufferer. He still keeps thialion in the house, in case it should be needed.

CASE II. The patient, whose history is given above, was so well satisfied with results that he brought an elder brother of his to me for treatment. He was a carpenter by occupation, aged 39, and suffered much from the following symptoms; to wit:

Constipation; intestinal fermentation; urinous odor of breath; painful urination, with burning sensation, and a desire to micturate every few minutes. He would pass about one teaspoonful in great agony. The small quantity was hyperacid; irritating; sp. gr. 1.040. As far back as the patient could remember, he had suffered more or less in this way; but had been worse for the past six years, since living in Virginia. Several physicians had been consulted, and he would get some relief for a while; but the same old complaint invariably turned up again.

Upon learning of his brother's relief, this man was very anxious to obtain similar treatment, and called upon me for that purpose. From the history I learned that the father of these men had died of rheumatism, and I thought it probable that hereditary influences had something to do with their condition. However, I immediately placed my man on thialion, t. i. d., and at bed-time. The liver quickly responded to the action of the drug, and one or two movements of the bowels occurred each day.

The skin and kidneys also became more active; and all burning sensation disappeared as the urine increased greatly in amount. In fact, all symptoms have nearly disappeared and the patient is feeling comfortable. He is still taking thialion occasionally. This man came under my care Nov. 30, 1904, and continued until Jan. 9, 1905.

819 CLAY ST., JAN. 25, 1905.

CONSTIPATION AND HEADACHE.

BY G. R. GWYNN, M. D., LEBANON, TENN.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

The following case recently came under my notice, and owing to the quick action of the remedy employed in the treatment, I take pleasure in reporting it here:

Dr. J., a practitioner of medicine, 60 years of age, had been complaining for a month, with loss of appetite, nausea, constipation and headache. The urine was scant, dark, excessively acid, gravity 1.030, and contained a large quantity of uric acid in the form of the well-known “brick-dust” deposit.

Thialion was prescribed in drachm doses, in a glassful of hot water, three times daily.

Results: Skin cleared up. Appetite improved. Constipation relieved. Uric acid soon disappeared from the urine; and, in twenty days, he was like a new man.

The thialion was kept up two days in each week, for one month.

It is now six months since treatment was stopped, and there has been no return of the symptoms.

I place thialion at the head of all remedies, for the elimination of uric acid from the system.

JAN. 25, 1905.

PUERPERAL TOXÆMIA.

BY LOUIS W. DUNAVAN, M. D., CHICAGO, ILL.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

I have been in the habit of prescribing the laxative lithia salt, thialion, in appropriate cases, for the past three years, and always with results eminently satisfactory to both patient and myself. In constipation, hepatic congestion, rheumatism and the uric acid toxæmias,

I consider it especially valuable. It has occurred to me to report a case which happened in my practice about two years ago, and which I deem to be relevant and interesting; to wit:

Mrs. R., American, married, at 30, about 8 months pregnant, general health stated as always good.

I was called hurriedly to see this woman, and found her in convulsions. I catheterized her, and found urine loaded with albumin. Under anaesthesia, rapid dilatation of the os was accomplished, and with forceps an eight-months' foetus was delivered.

The patient made a very slow recovery. Urine was very scanty; gravity 1.030; high colored; strongly acid; albumin present. Bowels very constipated, and resisted all forms of laxatives—moved only by means of enemas, and stools were extremely offensive. Liver engorged and tender upon palpation.

Skin and conjunctiva had the characteristic icteric hue. Tongue thick, flabby and covered with dirty grayish coat.

Appetite poor—almost complete anorexia—patient saying that sight of food made her sick.

Various forms of medication were used in this case, with but little benefit. The patient became more morose and melancholy, and could only sleep when given narcotics. The digestive functions seemed almost lost. At this juncture, it occurred to me to try thialion—as a friend had used it with success in a somewhat similar case. I ordered it, one teaspoonful dissolved in a teacupful of hot water thrice daily. The improvement was immediate and remarkable. The bowels moved naturally, and soon lost their offensive odor. Examination of urine showed, quantity 1600 c. c., albumen absent, gravity 1.020, reaction slightly acid, color light yellow. The appetite improved rapidly, and the patient became cheerful and hopeful.

After one week, the medicine was given night and morning only. The improvement was rapid, and at the end of the third week the patient was able to walk about her room. For the succeeding weeks, the medicine was given only once daily, one teaspoonful on arising. At this time, treatment was discontinued as the patient was entirely cured.

Recently, I had the pleasure of delivering this patient of a fine boy, without a symptom of recurrence of her former trouble. Pregnancy, child-birth and puerperium were strictly normal. I can only wish success for such a preparation. It is ethical and meritorious.

THE "FRANKLIN," 43D AND STATE STREETS, JAN. 25, 1905.

LUMBAGO.

BY IRA A. MARSHALL, M. D., IRONTON, MO.

Local Surgeon St. L., I. M. & S. R. R.; Examiner Mutual Life Ins. Co.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

About the 1st of November, 1904, I was called to attend a woman, 60 years of age, who had been ill about a week. She was suffering from severe pains in the lumbar region, extending down the left leg. The pain was so severe that it was impossible for her to move without great agony. She suffered also from headache; the tongue was coated; bowels were badly constipated. The urine was scant, and of high specific gravity. On filling test-tube half full of urine, adding nitric acid and freezing, beautiful crystals of uric acid were shown.

Began treatment of this case with proto-iodide of mercury tablets, followed by saline laxatives, until bowels moved freely. Then gave aspirin and salicylate of lithium (5 grs. each), every three hours. Also had the back and limb rubbed with alcohol and chloroform liniment. Hot lemonade drinks were given, with a fruit and vegetable diet. This treatment was kept up for about ten days, the patient becoming better at times, then worse again.

I finally concluded to try thialion, and gave it in teaspoonful doses in hot water, every four hours. The improvement was marked from the first day. In these cases, there are two indications to be met, viz.: 1. The solution of the uric acid. 2. Its elimination from the blood. Thialion answers this purpose admirably; but it should be kept up long enough.

The patient may, if anæmic, need iron, arsenic, hypophosphites, etc., which the physician will prescribe as indicated. This, with the proper diet and exercise, a generous amount of hot water, internally and externally (baths), and the thialion regularly administered, will give satisfaction to yourself and to your patients.

JAN. 25, 1905.

RHEUMATISM.

BY FRANK M. HENDRICK, M. D., PHILADELPHIA, PA.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

I have been using thialion now for about a year and a half, and as I have found results were good I shall continue to use it in my daily practice. The following two cases, in which it was employed with success, will serve to illustrate somewhat:

CASE 1. Patient, a clergyman, aged 55, had been ill four months, with acute rheumatism. General symptoms were headache, nausea, dyspepsia and constipation. Local symptoms,

were pain in shoulders, loins, and severe pain in both ankles. The pains in ankles became so severe that he was compelled to remain in bed. The urine was scant in amount (28 ounces), high colored, strongly acid, sp. gr. 1.020. The vessel used during the night would show copious red deposit in the morning.

The treatment given, previous to the use of thialion, resulted in no permanent relief, and the patient became very much dissatisfied; but through persuasion, he was finally prevailed upon to try another prescription. This was thialion.

At the end of the first week the patient came to the office and reported that the pain in back and shoulders had subsided, and that he could sleep all night without being compelled to get up to urinate. At the end of the second week, all pains had practically disappeared, excepting slight twinges in the morning upon arising.

The previous treatment in this case comprised such well-known anti-rheumatics, as sodium salicylate, salicin, potassium iodide, guaiacum, etc., but thialion walked off with the laurels.

CASE II. Female, age 45, washer-woman, had been a sufferer for 2 years, off and on, with chronic rheumatism. Headache, chronic sore throat, attacks of indigestion, almost habitual constipation, and twinges of neuralgia, were some of the symptoms. Her chief complaint, however, was with her hands, which gave her such excruciating pain at times as to prevent her from washing clothes. The urine was scant (30 oz.), over acid, light brown in color, sp. gr 1.032, and gave her unpleasant symptoms on voidance. There was a heavy brick-dust sediment in the vessel, mornings. Bowels constipated.

TREATMENT. Abstinence from meat. Vegetable diet. Interdiction of tea and coffee. Drachm doses of phosphate of soda, morning and night. Pepsin and dilute hydrochloric acid for correction of digestion. Salicylate of soda as an anti-rheumatic.

Patient returned, little benefited, two weeks ago to renew treatment. She was then put on thialion.

She now writes me, stating that the burning pain, previously experienced on urinating, has entirely disappeared—and this, the first time for two or three years. She states that the pain in her hands is "almost gone" and that she has free use of them, though heretofore they had seemed to be "tight or swollen like."

713 SO. FIFTEENTH ST., JAN. 25, 1905.

HEPATIC ENGORGEMENT.

BY R. H. SAWYER, M. D., HICKMAN, NEB.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

The patient, female, age 40, was a victim of hepatic insufficiency and congested ovaries. Whenever the liver became congested, the following symptoms were well marked; to wit:

Excruciating headache. Pain in the region of the liver and over the ovaries. Urine, scanty; high specific gravity; very acid; dark brown color. Bowels constipated.

TREATMENT. At first call, elimination was the order, i. e., calomel, etc., being given, followed by olive oil.

After the acute stage, thialion and phosphate of soda, equal parts, were given, three times per day.

In regard to diet, care was taken to limit the ingestion of substances that would tend to form toxic material for the liver. Hence, the restriction of meat, diet, elimination of alcoholic beverages, spices, etc. My directions were to allow but little or no fats, as, of course, they are but illily digested when bile function is poor, thus causing irritation. The necessary albumen was to be procured from eggs, vegetables, skinned milk, etc.

After a few weeks of dieting, plus the eliminative treatment with thialion, the following results were secured: No perceptible tenderness in region of liver. Headaches ceased. Skin cleared. The bodily functions seemed to be normal again. More or less tenderness remained over ovaries, but it was greatly relieved as soon as elimination was complete.

I find thialion very effective in troubles caused by retention of any of the secretions. It seems to open up the avenues of escape for effete material by way of skin, kidneys and bowels.

To SUMMARIZE. Advise mixed diet,—vegetables, cereals, etc.; meat sparingly, once daily; plenty of eggs and milk; little fat; water in abundance, bathe freely; exercise, as horse-back riding. *Keep all eructories freely open*—which can be done nicely with thialion.

Jan. 25, 1905.

URICACIDÆMIA.

BY F. GARCIA DE LA TORRE, M. D., MAYAGUEZ, PORTO RICO.

Ass't Health Officer; Physician and Surgeon to the Municipal Hospital.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

For some time, I have been in receipt of the *Uric Acid Monthly*, regularly; and as I find many interesting clinical articles in it, I have decided to report for publication a case which I myself, recently treated with the best results, by the use of thialion; to wit:

Mr. Frederico Rivera sent for me, Sept. 26, 1903, claiming to be very ill. He was a sugar-maker by occupation; aged 32.

After having the patient under observation for several days, I discovered that the urethral mucous membrane was somewhat inflamed. There was also some cystitis. The appetite was perverted; tongue, heavily coated; and complaint was made of a metallic taste.

There was occasional vomiting (especially after dinner), and flatulence was a marked symptom. Bowels did not move regularly, and diarrhoea was frequently present. Some suffering from hemorrhoids had been complained of for a long time. Heart pulsations and arterial tension were much exaggerated.

On Oct. 28th, I made the diagnosis of "lithemia," due to uric acid retention, and ordered a dietary treatment—restriction of purin foods, starches, etc.

On Nov. 3rd, I began the use of bromide of sodium (patient was neurasthenic,) combined with diuretics and the salts of lithium (highly diluted) in order to aid the excretion of urates and reduce acidæmia. As digestion was bad, I was compelled to prescribe H Cl—used in combination with nux vomica to regulate the appetite.

The above treatment was continued until Jan. 1, 1904, when I called Dr. Bajandas in consultation. He called my attention to thialion, which preparation he said he had employed in similar cases with the best results. As I thought the case at this juncture was probably hopeless, I did not object to trying it; and I must confess, that, a short time afterwards, my patient began to feel better. He improved steadily, and to-day is entirely recovered and has gone back to his work.

Owing to the success of thialion in the above case, I became much interested in the physiological action of the drug, and have ever since given close attention to the literature regarding it.

Jan. 21, 1905.

A CASE OF RHEUMATISM.

BY Y. EDWARDS, M. D., WALESBORO, IND.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 2.)

The patient, a man aged 73, painter and paper-hanger by occupation, has since middle life been subject to chronic rheumatism, the monotony of which was relieved, nearly every winter, by acute intercurrent attacks of the same malady. In the early winter of 1901-2, he had an aggravated attack, which I treated with salicylates with very indifferent results; but, in about thirty days, the acute symptoms (mainly excruciating pain, with slight fever and very little if any swelling) subsided, and the chronic twitch with its concomitant grunt, embellished with a wry face, was the only evidence left that rheumatism was abroad in the land.

The next winter came on, and with it a renewal of the same torture, only it was of a much worse type. He had lost confidence in medicines; but, when I called, he said that he did not deem it the duty of a sane man to suffer such agonies as he had, and that unless he obtained relief in three days he would "take something." I understood and felt my responsibility. I began by loading him with cimicifuga rac. and thialion—with a little phenacetin and salicylic acid to keep him quiet. At the expiration of the three days he said he wanted to stay longer on the earth.

My next move was to keep him "good," so I decreased the dosage of both thialion and cimicifuga, which he took for 30 days; and up to the present time, he has had no ache, and seems to be in perfect health. The urine was at first heavily loaded with uric acid crystals, noted by heavy "brick-dust" deposits; high specific gravity; very much reduced in quantity; and, when the attacks were severe, occasioned some pain on voidance. The reaction was, for some time, strongly acid after beginning the medicine, and even after the pain had ceased; but it soon became alkaline, and then, on reduction of dosage, became acid. The constipation, which was habitual prior to treatment, yielded easily.

After fourteen months, the old gentleman still has excellent health and tells me that he has some faith in medicine, for rheumatism; but, that when it strikes a fellow in the region of the sciatic notch, it is close akin to that blissful summer abode prepared for us all below, sometimes yclept Gehenna.

Jan. 30, 1905.

RHEUMATISM AND NEURASTHENIA.

BY R. E. HAUGHTON, M. D., RICHMOND, IND.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)

I have been using thialion in all cases in which there is a clear manifestation of an excess of uric acid in the system, producing such derangements of health as are found in muscular rheumatism, indigestion, "nervous headache," neurasthenia, etc.

CASE I. Mrs. B., an elderly woman of 60 years, suffered an attack of muscular rheumatism. As the wife of a farmer, owning a large farm, she was used to exposure and hard work. She was also the mother of a large family. I had been her physician for 40 years and had attended

her in all her confinements,—also in one severe attack of bronchitis; yet she had never before had such an attack of rheumatism. I examined her urine and found urate deposits in quantity. There were evidences of faulty elimination, as well as of a "faulty liver"—the latter being a history for years. The urine was over-acid; low specific gravity (1.010); no albumen; no sugar; chlorides normal, or nearly so.

The patient was put upon thialion in full and frequent doses, until such action of bowels and kidneys was produced as to greatly mitigate the attack, so that in a short time she was on her feet and rode in her buggy, visiting neighbors and friends. In short, the remedy was given freely with improvement and cure.

CASE II. Mrs. D., widow lady, who lived on a farm, worked hard and was much exposed, was attacked with lumbago, which subsequently developed into a severe sciatica, accompanied with a peculiar soreness and enlargement of the limb so affected. I measured the limb. Her history revealed a long, chronic nervous condition, pain of rheumatic form, with tenderness over the spine from the cervical to the lumbar region. There were no symptoms pointing toward disturbance of the pelvic organs, except transient or shooting pains.

Though this woman was very much disabled, she kept on her feet till I saw her. The urine was of high acidity; specific gravity, 1.020; no albumen and no sugar. Kidneys and bowels were not acting up to standard, and I considered that the trouble was due principally to failure of elimination of uric acid. I prescribed thialion in sufficient dosage to thoroughly slush out the intestinal tract at the outset; after which, a dose morning and night kept the bowels soluble and regular. On the first report, the patient was much improved. The improvement continued; and at last report she was far better than she had been for months before.

CASE III. I have now a case under treatment, Mrs. F., with all the ailments of the category. She has been a neurasthenic, or nervous invalid for years, and has been under other care than mine. I carefully examined her case and found the uric acid diathesis marked, with a long history of nervous symptoms. The spine is tender, throughout its course; kidneys and bowels inactive; skin, dry and harsh. Urine, by evaporation, showed a large proportion of red crystals, which, chemically tested, were shown to be urates. Specific gravity, 1.015; no albumen; no sugar. Bowels, constipated.

I diagnosed the case simply one of neurasthenia, due to the excessive retention of uric acid in the system—for I believe this waste salt, by its irritant action, is often a disturber of nervous force. On taking charge of this patient, I limited her to a farinaceous diet and ordered her to take thialion at such time and in such amount as to act freely on bowels and kidneys. She improved on the first prescription, and came again. She has continued to steadily improve. So I hope to eventually effect a cure, if I can prevail on her to exercise due patience and continue to take the remedy, as I shall direct. She is not so much rheumatic; but, as I have said, she is a typical *nervous invalid*.

I believe that such cases as the above can be cured, or, at least, restored to a fair state of health, if we will but use appropriate means. I have found good results so far, in the use of thialion. It contains the elements of *ELIMINATION*—and on this basis I expect results. Our patients, however, are prone to live on nitrogenous or purin foods, at the expense of farinaceous foods; and right here, I believe, is a frequent cause for such defects in the metabolism of cells and tissues, as to produce what may be called "*general toxæmia with nervous impairment*." The American people are a nation of growing "*dyspeptics*," because they eat too much rich food, especially meats. When will we learn to be wise and cultivate the development of "*mens sana in corpore sano!*"

Failure of the excretory organs to eliminate waste is certain sooner or later to furnish the doctor with cases of neurasthenia, "pains and aches" (which we call rheumatism), and possibly many more ailments which are purely reflex and nervous—thus complicating the question of "what is the matter?" Most troubles—sore surgical ones, and injuries—are first, departures from standard nutrition, by violations of law in diet and drink, exposures of one kind and another in our very changeable climate, and neglecting the calls of nature to *shake down the grates and clean out the ashes*. The gouty, rheumatic and eczematous conditions all bear close relation to this failure of elimination. The question has often arisen in my mind: "What relation does this failure of elimination by the kidneys, bear to the actual pathological condition of the renal cells engaged in the function of excreting waste elements?" In other words, what is the vital chemistry of the cells in this function? I do not find evidence of inflammation of the kidneys; but I do find variations of standard in the functions of the same. Where, then, shall we locate the trouble? In this; viz.: A failure in the function of cells to eliminate, with consequent toxic conditions reverting to the blood. If this be true, the rationale of the solvent and eliminant treatment, with an agent like thialion—which aids in expelling from the body the most commonly retained of these toxic elements—becomes at once manifest.

LITHEMIC ATTACKS AND GALL STONES.

BY B. X. CORBIN, M. D., SCHUYLER, NEB.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)**CASE I.** Male; age 64; occupation, farmer.

On October 10, 1904, on arising from bed in the morning, this man was suddenly seized with vertigo. He did not fall; but was enabled to maintain his equilibrium only with great difficulty. Previous to this, the patient had been in good health—excepting that he had had some difficulty in passing his urine. Also, according to his statement, the urine was of very strong ammoniacal odor.

When I was called in to see the patient, I found him sitting in a chair. He said that as soon as he moved he became "dizzy," but, when he remained quiet, he was "O. K." He had a full, hard pulse; but heart examination proved negative. Tongue was coated; bad taste in the mouth. Eyes and ears, normal—also reflexes.

Examination per rectum disclosed enlarged prostate (which probably accounted for his difficulty in urinating). The urine was over acid; abnormal in amount (72 oz. per day); sp. gr. 1.025; no sugar; no casts, on microscopical examination. There was no cloudiness, on boiling; but a heavy deposit of grayish and pink substance, on cooling—which cleared up with heat.

I suspected, at first, some trouble in the cerebellum—possibly a clot. I could not think it a tumor, as the onset was too sudden. I put him on the mild chloride, followed by Epsom salts. Ordered a diet of milk and farinaceous foods, for a few days. Gave bromides and cannabis. He improved slightly: that is, the tongue cleaned off, bad taste disappeared and dizziness was not quite so bad. The bowels were kept loose—in fact, they became too loose. In a few days however, the patient was much worse.

Urinalysis, from time to time, revealed nothing different than at first, excepting that once the gravity was only 1.004; but, with the most careful examination, no casts were found. I tried various things; e. g., potassium acetate, sodium iodide, nitroglycerine. The results were unsatisfactory. That patient would improve for a time and then get worse.

At last in my desperate straits, as a *dernier ressort*, I put him on thialion. I think I can say the patient's condition improved almost from the start. In all, we used three bottles. The urates have disappeared from the urine, and the amount of the latter is reduced. Patient now gets up at night very seldom to urinate. Dizziness has disappeared entirely.

I might mention in closing, that this man's diet, for years, was usually meat (generally pork); black coffee, three times daily; bread, without butter. This was his customary diet though, occasionally, he would eat raw or cooked fruit,—rarely other articles. He was also a heavy smoker.

CASE II. Male; age 26; harnessmaker. Previous history was excellent. He was a moderate eater. He ate very little meat; no tea, nor coffee; no tobacco, nor liquors of any kind. He was an exemplar.

On the evening of Nov. 12, 1904, this man was seized with severe, cutting pains in the epigastrium. He felt nauseated, and, finally, he vomited; the vomit, the first time, consisting of his supper—then mucus. When I was called, I found a feeble pulse, cold skin, cold sweat, and the patient seemed to be in great agony. I examined thoroughly, by palpation, over the region of liver and gall-bladder; but, I must say, I failed to discover anything.

The next day, however, we discovered some small stones in the feces. During the course of a week, the patient had several "spells" like the one above described. After the first attack, his eye balls and mucous membranes took on a yellow tinge.

For the pain, he was given hypodermics of morphia and atropia—also hot local applications. On the third day, I put him on thialion. There have been no further attacks, and the patient is now enjoying excellent health.

I might report many interesting cases from the use of thialion. Have used it in two cases of renal calculi, with excellent results. Also in several cases of rheumatism,—i. e., in cases that seemed to be autoinfecious in character.

Feb. 1, 1905.

INDIGESTION, CONSTIPATION, INSOMNIA, ETC.

BY T. J. BERRYMAN, M. D., IRON MOUND, KY.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)

The patient, male, age 40, was a farmer by occupation, who had finally been forced to seek professional advice after having been a semi-invalid for two years or more. He was a typical specimen of the man, who is constantly made aware of the fact that he is the unfortunate possessor of an organ, called the "*liver*," of whose power for good or evil he has had abundant personal evidence.

The principal symptoms complained of in this case, were indigestion, almost complete loss of appetite for food, extreme nervousness, inability to sleep, and the necessity of taking a

physic to move the bowels. There was some bloating of the abdomen, and considerable tenderness to pressure in the epigastric region.

The skin was harsh and dry, presenting a jaundiced appearance. The conjunctivæ had the well-known icteric hue. The urine was concentrated (25 oz. per day;) very highly colored; sp. gr., 1.026-30.

Aside from iron and strychnia, as a general tonic, the only remedy administered in the treatment of this case, was thialion. After first slushing out the bowels thoroughly, it was given regularly for fortnight, morning, noon and night. A heaping teaspoonful was dissolved in a half glassful of hot water, and prescribed before each meal. The dosage was gradually reduced, or given less frequently, until at the end of six months the patient was discharged entirely cured.

This man now attends to his work on the farm and considers himself in good health. The symptoms enumerated above, which, for two years, had rendered his life miserable, have disappeared. As the result of the action of thialion in this, and other similar cases, I am convinced that it is a valuable addition to the progressive physicians' armamentarium, and that it has come to stay.

Jan. 31, 1905.

ASTHMA OF TWENTY YEARS' STANDING.

BY W. B. PARKER, M. D., SMITHVILLE, TENN.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)

I take pleasure in submitting the subjoined brief report of an interesting case, in which good results were attained from the use of thialion. I may remark, in passing, that, in this drug, I have found a preparation upon which, from my clinical experience, I have learned to rely exclusively in the treatment of uric acid troubles. While I am not, like some, prone to place too much importance upon uric acid as the causative factor in all diseases which the human race is heir to, yet I think if certain cases were properly investigated along that line, and more attention paid to elimination, we would get better therapeutic results.

Some years ago, I became impressed with the uric acid theory, partly from clinical experience and partly from reading such literature on the subject as fell into my hands. I had at that time in my care a case of asthma of long standing—perhaps twenty years. Realizing that the treatment of uric acid cases taxes the ingenuity of the physician to no small degree, I feel that a report of this case, in which the treatment was so successful, would be interesting to you as well as beneficial to my brother practitioners; to wit:

Patient, female, aged 43; occupation, housewife. She was well educated—the wife of a prominent attorney. An attack of the asthma would come on every twenty or thirty days, lasting from five days to a fortnight. Paroxysms would invariably occur at night. However, there would be some premonitory symptoms the day before, so that patient would always be able to tell just about when she would have an attack. The amount of urine would decrease considerably; specific gravity would be very high; marked brick dust deposit, and strong acid reaction. Bowels at the onset would be regular, but toward the close of the attack a severe diarrhoea would develop. Intense vomiting present all the time, of typical bilious matter.

At this stage, when I was called, it was impossible for the stomach to retain anything; hence all remedies had to be administered hypodermatically, or by inhalation. Chloroform and morphia were her favorite remedies then; but, I saw, at once, that it would not do to continue them, for the patient was of the nervous temperament, and each attack set up various reflex nervous troubles, which, added to the primary trouble, would make it a serious proposition.

For some time, she had been using chloroform for the relief of these attacks. She would saturate a handkerchief, begin to inhale it, and when she had become sufficiently relaxed the hand would fall away—an automatic inhaler, by the way. After giving this case some little thought, I decided to try thialion. I ordered a teaspoonful, dissolved in a cupful of hot water, to be taken before breakfast, and continued every three hours until a bilious discharge from the bowels occurred. To my very great surprise, as long as she continued this treatment, she would be entirely free from these attacks.

Feb. 20, 1905.

ACUTE ARTICULAR RHEUMATISM.

BY DAVID O'BRIEN, M. D., URBANA, OHIO.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)

For a number of years past I have been using thialion in my daily work, and I like its action very much. I was more than pleased with the use of it in the following case of rheumatism, which I treated this last winter; to wit:

A young man, 25 years of age, who was clerk in a dry goods store, had been down with rheumatism two weeks, when I was first called to see him. His bowels had become badly constipated, from the morphine he had been given to alleviate his suffering. His knees were

considerably swollen and very tender to the touch, and he could not be moved in bed without great suffering. His skin was dry and hot; temperature, 102° . The urine was scanty and very high colored from dissolved urates, etc. His appetite was gone, and he was really in a pitiful condition.

The treatment consisted in the ordering of a hot bath, in bed, every day; while the limbs were carefully bandaged with absorbent cotton. I gave him teaspoonful doses of thialion, dissolved in a cupful of hot water, before meals and at bedtime. His diet was restricted, all forms of red meat being largely interdicted, and he was urged to drink plenty of good rain water, or buttermilk.

After the first day, there was marked improvement in the man's condition. The fever dropped; the skin became moist; the urine increased greatly in amount, the color becoming normal on the second day; the pain and swelling in the limbs gradually disappeared; the bowels were opened, and appetite soon returned. In short, in one week from the day I first saw him, the patient was back to his post at work.

March 13, 1905.

ACHES AND PAINS.

BY THOS. F. COLLINS, M. D., JACKSON CENTER, PA.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)

It gives me pleasure to report the following case, which came under my care some time ago:

Mr. M., aged 29, barber by occupation, presented himself for treatment, stating that he had consulted all the other available physicians of the various schools, and had obtained only temporary relief. He came, complaining of general pains throughout the body: arms, chest, joints, legs. He had no appetite; and was constipated to such an extent that he had to "take something," or the bowels would not move for three or four days at a time. His skin had a decided dirty, tawny appearance.

The urine was variable as to quantity and general appearance. The specimen examined showed a specific gravity of 1.028, strong acid reaction, and dark straw color by transmitted light. Uric acid was present in abundance, the deposits frequently coating the chamber a red-brown color.

The diagnosis was "uricacidæmia."

The treatment, at first, consisted in prohibiting excessive meat diet, while the drinking of plenty of water was encouraged. Small doses of podophyllin were given to move the bowels. Epigaea, chimaphila, and remedies of like nature were given as seemed indicated. Slight improvement followed, but nothing like complete relief.

It was about this time that thialion first came to my attention. I decided to give it a thorough trial. I gave it in full doses, of a heaping teaspoonful, three times a day, for five weeks; after which the size of the dose was lessened, and later its frequency. At the end of two months, the man was entirely free from all symptoms of his former ailment. The cure was complete.

March 16, 1905.

PROPHYLACTIC TREATMENT OF MYALGIA.

BY E. W. CRATER, M. D., OCEANPORT, N. J.

(Reprint from *Uric Acid Monthly*, Vol. v. No. 3.)

Patient, M. W., female, pronounced brunette, is married, though barren. Age 35; height, five ft. six in.; weight 170 pounds. As far as possible, she attends to her household duties. Both parents were rheumatic. Patient has suffered from rheumatic pains since childhood; earlier in life having had attacks of inflammatory rheumatism. During the past ten years or more, since which she has been a patient of mine, she has suffered from muscular rheumatism affecting the diaphragm, deltoid, supra and subscapulars, intercostals, etc.—in the order given as to frequency. She has also had several attacks of sciatica, and, two years ago, a severe rheumatic endocarditis—a form of the affection which proved fatal to a sister about one year earlier. Her urine is rather scant, loaded with uric acid until just before an attack, when it is very pale and limpid. During attacks, the only times I have examined the urine, sp. gr. varies from 1.024 to 1.030; highly acid; no albumen; no sugar; heavy sediment, consisting of bladder mucus, epithelium, crystals of oxalate of lime and uric acid; no casts. Bowels usually regular; in event of sluggishness in that respect, recourse is had to laxatives, usually Rochelle salts.

In treating this case, I have tried nearly all remedies recommended by writers on the subject and have exhausted all my own common sense ideas, with little benefit. We would usually have two, sometimes three attacks between Dec. 1st and April 1st, sufficiently severe to con-

fine patient to her bed from one to eight weeks. Have always urged moderation in partaking of meats; ordered fruit and vegetables, cereals, etc., freely.

Having used thialion previously, a few times, I concluded that here was a case to test its merits or uselessness. I therefore began treatment, August, 1904, with a clear object in view; viz.: *to prevent the regular winter attacks.* At stated intervals, a bottle of thialion was ordered, three or four teaspoonful doses to be taken daily, according to effect upon the bowels. The patient has taken altogether five bottles of the salt, and so far has escaped her winter attack in a severe form.

About a week ago, she had a slight attack of intercostal rheumatism, which only confined her to the bed two days, and was hardly to be considered. I think this attack was due to exposure to damp air, raw east wind, and remaining up all night with a sick friend in a poorly heated apartment. I can only ascribe her immunity from attacks this winter to the occasional dosing with thialion.

The patient is quite enthusiastic in her praise of the remedy; and, unless something unexpectedly should occur, she will, next fall, 1905, begin a regular course of thialion—one bottle per month.

March 20, 1905.

CHOLELITHIASIS.

BY E. T. HEWSON, M. D., DETROIT, MICH.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 3.)

I give here for publication a partial account of a refractory case, which did not come to my attention until others had resorted to various expedients to afford the patient relief, and failed. As I chanced to hit upon the correct diagnosis, no great trouble was experienced in effecting a cure. It was, I believe, the first case—that is, bad case, we had treated with thialion, in Detroit. But the tidings of the excellence of the new remedy was bruited far and wide; for the man assured every one, with whom he came in contact, that thialion would cure every case of uric acid origin, no matter how bad it was.

The patient, Mr. W., was a policeman. Until three years ago, he was tolerably healthy, being at that time about 40 years of age. At the time mentioned, he was taken sick, and a first class physician called in to attend him. He remained under the charge of this gentleman for a considerable period, a call being made once a day and very often twice a day; but he failed to make any improvement—owing, probably, to the lack of a correct diagnosis. The physician in charge tried many medicines, changing the prescription frequently; but, after attending the case for about eighteen months, he came to the conclusion that a cure was impossible, and informed the sick man that many of his prescriptions had been absolutely futile.

A well-known stomach specialist was now called in and the patient was examined in a thoroughly scientific manner. It was found (and so asserted) that uric acid was the chief disturbing factor and was doubtless causing all the trouble. But even yet—though many established remedies were tried—nothing would effect a cure. The man was sometimes made desperate, during the paroxysm of an attack, the pain and straining being so great as to threaten rupture of the abdominal muscles. Once, a sheet had to be tightened firmly around his body to withstand the pressure caused by the internal strain.

The patient could generally eat his three meals a day, taking meat of some kind at noon (having a preference for beef); and other articles of food seemed to be enjoyed by him. No special examination of the urine had been made. The bowels were, as a rule, regular, though sometimes a little “opening medicine” had to be used.

The case had attracted considerable attention by this time and one day I was called to see him. During the conversation, I expressed my belief in the possibility of a cure by means of a certain remedy. Though the patient had become strongly averse to further experimentation, my air of conviction impressed him, and shortly afterward his wife came to me and begged that I should get the medicine referred to as soon as possible. I at once ordered a four ounce package of thialion from the manufacturers, and, as soon as I received it, took it to the patient and directed him how to proceed.

Upon taking thialion, the man said that the first few doses did him no good and he was tempted to give it up; but his wife persuaded him to persevere. He did so, and after continuing a day or two he felt a change. Every day thereafter, there was an improvement. At the end of the twelfth day he went on duty.

This was the worst case I ever met with. But the cure was complete, for the man has never been troubled since.

794 Sixth St., March 21, 1905.

FIFTEEN YEARS OF CHRONIC RHEUMATISM.

BY J. E. G. WADDINGTON, M. D., DETROIT, MICH.

(Reprint from *Uric Acid Monthly*, Vol. v; No. 5.)

Mrs. E. D., at 45 years, housewife, suffered from chronic rheumatism of over fifteen years' duration.

Was first called to see the case, on Dec. 6, 1904. The patient was dressed and sitting up in a chair, but suffering considerable pain in her left ankle, which was swollen and acutely painful upon pressure. While she remained quiescent, a dull gnawing pain in the joint was experienced, varied at infrequent intervals by sharp, lancinating pains, described by the patient, as feeling like a "lightning stroke" going "right through" her ankle joint. So sharp were these pains, and so sudden, as to cause her to cry out at each attack.

Temperature, 99.4. Pulse, 110, full and bounding. Patient weighed about 250 lbs.; was habitually constipated, and extremely nervous. Examination of heart revealed a slight mitral insufficiency, which accounted for the "heart trouble" she informed me she had suffered from for years—being unable to walk any distance or do any particular amount of work without suffering from great fatigue, dyspnea, heart flutterings and stabbing pains in the cardiac region. Stiffness in her joints also precluded any idea of much locomotion, even when, as sometimes happened, her heart gave her but little trouble.

Patient menstruated regularly every month, and informed me that she had never experienced any discomfort or ills from her periods at any time. Married at the age of 16. Mother of two children, aged respectively 28 and 21: both confinements normal.

First noticed rheumatic symptoms after undue exposure, returning from a dance fifteen years ago, and ever since had suffered more or less; but, of late years, had become an almost constant sufferer, slightly better during dry, warm weather, yet even at the best could not consider herself well. Her heart, she thought, began to trouble her about ten years ago. She had "doctored" much and tried patent remedies galore—sometimes experiencing a little relief, but never anything definite or lasting.

I had the ankle enveloped in hot, dry flannel, after being rubbed as thoroughly as the tenderness would permit with liniment ammoniæ; and, as bowels had not moved for two days, gave her a teaspoonful of compound jalap powder in half glassful sweetened water, to be repeated in six hours, if necessary. Prescribed specific tinctures of bryonia and veratrum (aa 3 ss to aq. 3 iv), 3 j every hour, for six doses, then every two hours.

Called next day. Patient much improved. Bowels had acted bounteously; ankle joint not so painful. Continued with the bryonia and veratrum mixture every two hours, ankle joint to be rubbed, every six or eight hours, with the liniment ammoniæ; diet restricted to farinaceous material. To cut a long story short, this treatment acted most admirably upon the acute manifestations; but, at the end of two weeks, despite all our efforts, we had simply got her back into her old chronic condition—no better and no worse than she generally was after her acute attacks.

I then had a urinalysis made, which showed but 27 ounces of urine for 24 hours; marked acid smell; reddish yellow in color; specific gravity, 1.032. Blue litmus paper was instantaneously changed to an intense red, upon being immersed in the urine. No sugar nor albumen. There was considerable amount of urates; hydrochloric acid test showing marked precipitation of uric acid crystals.

I now put her upon thialion, teaspoonful in half glassful hot water, half hour or hour before meals and at bedtime. In three days, she was vastly improved—said she felt "lighter." In two weeks she commenced moving about, going for short walks. I kept her upon an effective cardiac stimulant, for the valvular lesion, and cut down the thialion to three doses per day.

At the end of four weeks from her first dose, the patient walked over to my office, a distance of half a mile, and said she would take no more medicine, as she felt so good she "needed no more." Urinalysis now showed nothing abnormal. She had lost considerable weight, and she said she felt better for it. Her heart still gave her a little trouble, upon any undue exertion, but otherwise did not bother her. Her joints, which had all been affected at some time or another from previous rheumatic attacks, were becoming supple, and she could walk briskly and would do a light washing.

We have had considerable wet weather since, but she has only experienced very slight twinges in some one joint; and a few doses of thialion have always put the enemy to flight. She keeps a bottle of the salt in her house, as religiously as she does her bible; and, though I would have liked to keep her upon regular treatment—say one dose a day, for three months—yet, as I have before remarked, she considers herself well enough to dispense (excepting for occasional doses) with any regular medicine. She says she feels better than she can remember to have ever felt before.

1080 Warren Ave., May 12, 1905.

CASE OF AUTOINTOXICATION.

BY B. E. NEVIN, M. D., MERCERSBURG, PA.

(Reprint from *Uric Acid Monthly*, Vol. v; No., 5.)

I take the opportunity to report the following case here, without giving the initials of the patient's name. I am sorry I cannot say that he has fully recovered and will never have any return of his illness; which would be the case, however, if he would listen to my advice. But thialion always cleans him up; and, if he overeats and refuses to take exercise, that is his fault and not that of the medicine. When he first came under my care, he looked very much like a person who would soon discover the country, "from whose bourne no traveller returns." I have gotten a great deal of credit out of this case; but were it not for thialion I would be at *status quo*. When I am called, I simply say: "Well, Blank, you have done it again! Will have to put you on the 'Grain Medicine.'" (This is what he calls it.) And in two weeks, he is on his feet again.

CASE. Male. Age 56. Retired farmer.

DIAGNOSIS. Autointoxication. The trouble began twenty years ago. At first, an "explosion" occurred only once in a year or two; later, every year; and, at last, he was ill continuously, with severe attacks several times each year.

SYMPOTMS. Pain in head, neck and back. Hard, full pulse. Giddiness. Flushed face. Despondency. Weakness in limbs; at times, not being able to walk. Constipated. I first saw him in this condition after he had been in the hands of several physicians.

URINE. Scanty; high colored: brick dust deposits. At times, a shiny, brilliant scale-scum appeared on the surface of the urine after standing in the vessel. Highly acid. Specific gravity, not high.

BOWELS. Constipated. Twenty grains of calomel often produce little or no effect, unless followed by thialion.

TREATMENT. A capsule, containing calomel gr. xx, soda gr. x, podophyllin res. gr. j, given at bed-time. In the morning a heaping teaspoonful of thialion, in cupful of hot water, is given. This is repeated three times a day, till it forces free purging; then, once or twice a day till the urine becomes neutral. Afterwards, just enough of the salt is given each day, for one month, as is found necessary to hold the urine at the neutral point. In addition to the above, a steam bath is given for fifteen minutes each night, the patient rubbed dry and put to bed.

RESULTS. Always good. The patient is well in two weeks. He then overeats; takes no exercise; and the same thing occurs over again. He will not obey my orders as to eating and exercise. About twice a year, I have him on my hands for ten days or two weeks, but the treatment, as given, always cleans him up promptly.

MAY 16, 1905.

NEPHRITIS AND RHEUMATISM.

BY C. G. YAEGER, M. D., PHILADELPHIA, PA.

(Reprint from *Uric Acid Monthly*, Vol. v; No., 5.)

I have decided to report the following two cases for publication. I have prescribed thialion for a number of years now, and have found it beneficial in very many cases.

CASE I. Mr. F. P., a man 30 years of age, salesman, came to me in September, 1903, suffering with subacute nephritis. I examined his urine, and found albumen and urate deposits in quantity. The urine was overacid; low specific gravity, 1.015; no sugar; chlorides, normal, or nearly so. Microscopic examination showed hyaline casts in appreciable numbers.

The patient was put upon thialion until the bowels were thoroughly cleansed, after which a dose was given at sufficient intervals to keep the passages soluble and regular. Together with a nerve tonic, the treatment with thialion was kept up in this way, more or less regularly, for two or three months. The man is now well and able to attend to his usual work.

CASE II. Mrs. G., age 40, housewife, suffered an attack of articular rheumatism of the knee-joint, which had lasted for three months. She had taken potassium iodide and sodium salicylate without benefit.

Urinalysis revealed urate deposits in abundance. There were evidences of faulty elimination, as well as of a "faulty liver." The urine was hyperacid in reaction; no albumen; no sugar; chlorides normal.

The patient was put upon thialion in full and frequent doses, until such action of bowels and kidneys was produced as to greatly mitigate the attack, and thus enable her to walk about without the aid of crutches. She has since continued to steadily improve; so that now, at the expiration of the third month of her illness, she is able to go about her work as usual.

In both of these cases, it has been manifest to me, that to the solvent and eliminant action of the remedy must be chiefly attributed the beneficial effects produced.

MAY 17, 1905.

CRAMPS AND CHILLS.

BY JOHN P. RICE, M. D., FREDERICKSBURG, TEXAS.

(Reprint from *Uric Acid Monthly*, Vol. v: No. 5.)

Having recently had under my care a very interesting case of lithæmia, that yielded nicely to the action of thialion, I am led to report it.

Mr. L., aged 54, very stout and strong. A very large eater and hard worker. He was partial to his beer, wine and whiskey. He had learned from experience that he felt better, or well, only when freely perspiring, and this would obtain only as the result of hard work or exercise. Even under these circumstances, during atmospheric changes, he would return home oftentimes complaining of "cramps" in the muscles of his legs.

A few doses of magnesium sulphate would quickly give temporary relief; and this effect was so satisfactory to the patient, that he would insist that all he wanted was a supply of this remedy. As a rejoinder, he was told that he had better take something regularly for a while to disperse the deposits of waste debris from the system resulting from imperfect metabolism, which threatened at each of these attacks a "storm" of uric acid and an acute attack of rheumatic arthritis.

It was not long before the expected happened. I was called to his home to find him in bed, with fever 103° , and unable to turn over on account of pain in the muscles throughout the body. The urine was highly colored, with the familiar "brick-dust" deposit attached to the bottom and sides of the retainer. He was suffering intensely.

I immediately ordered thialion: a heaping teaspoonful in $\frac{1}{2}$ glassful of water, hot as could be taken, and repeated ever two hours, until bowels acted freely, which occurred after the fourth dose. I then directed him to take it every four hours, for three days. After that, twice a day, when he could work out of doors. Three times a day, if about the house and not exercising. Under this treatment, he soon got relief and felt comparatively well. I advised him to keep it up, however, once a day for a month. After two or three months, he quit using thialion altogether.

In the meantime, this man had acquired public office and began a life of more sedentary habits. As a result, it was not long before I was called to see him again. He was suffering with a rigor, which had lasted about half an hour when I saw him. He had skinned his shin, and exhibited a red, angry looking ulcer about as large or larger than a silver dollar. He said "the blamed thing wouldn't get well" with any of the applications that I had used in treating other members of his family for similar sores. "No," said I, "not until you have taken some of those salts" (referring to thialion) "to correct the excess of uric acid deposited throughout the system, which not only causes the rigor or chill but prevents the ulcer from healing. When this result has been accomplished, you will have no more chills, and the ulcer will heal upon the application of any simple antiseptic ointment."

I ordered more thialion. It was taken regularly for some six or seven months—once, and sometimes twice a day. He had no more chills after he began the use of the salt in this way, and the ulcer healed promptly in the course of two weeks. Today, though the patient is not so heavy, he is in better health, he says, than he has been before in twenty years.

MAY 15, 1905.

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